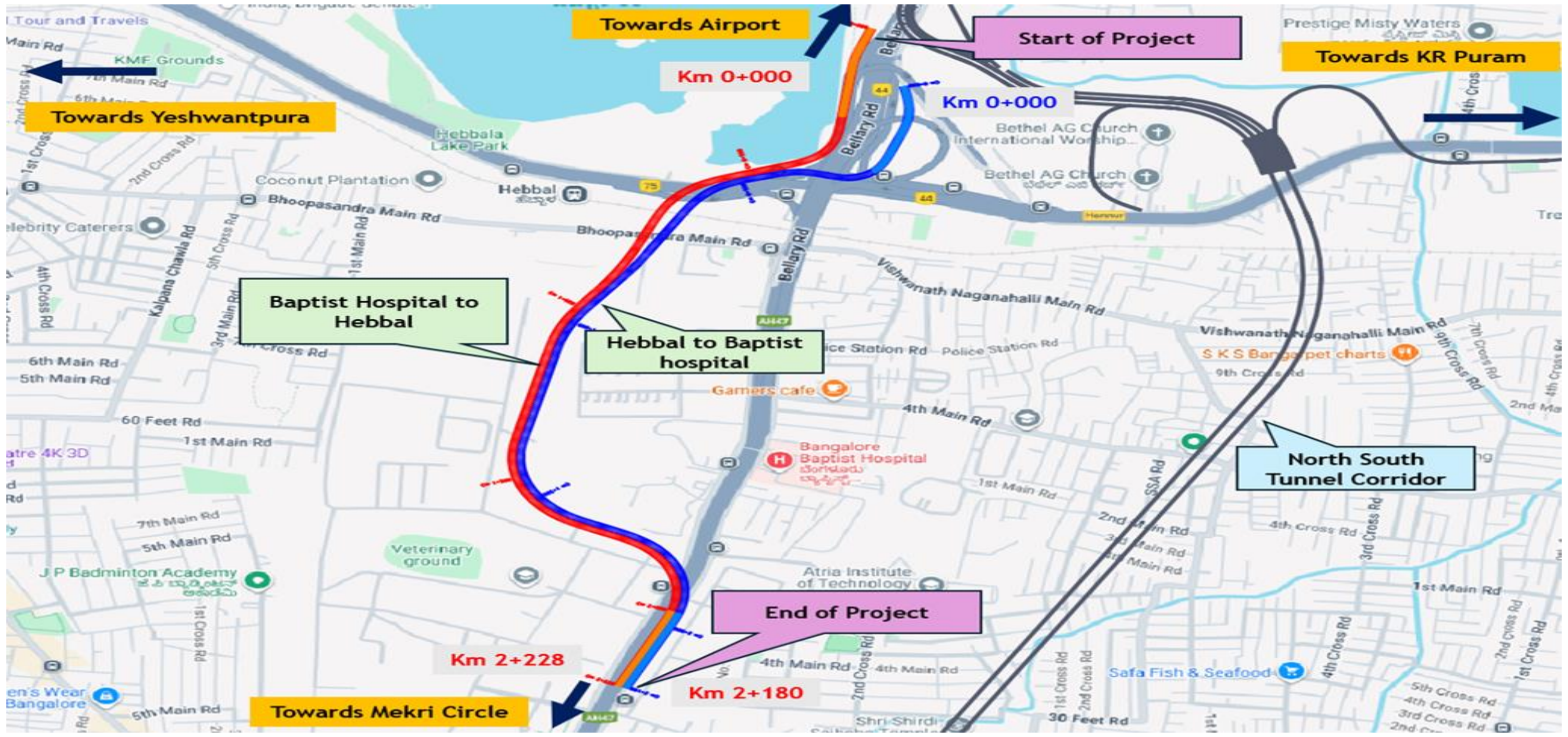
GOVERNMENT OF KARNATAKA

Consultancy Service for Preparation for DPR for short length transitory 3 lane bi-directional vehicular underpass connecting Hebbal flyover junction to Veterinary college via GKVK premises


Towards Airport
Start of Project
Towards KR Puram
Km 0+000
Km 0+000
Towards Yeshwantpura
Hebbala Lake Park
Coconut Plantation
Hebbal
Bhoopasandra Main Rd
Bellary Rd
Bethel AG Church International Worship
Vishwanath Naganahalli Main Rd
Baptist Hospital to Hebbal
Hebbal to Baptist hospital
Gamers cafe
Bangalore Baptist Hospital
North South Tunnel Corridor
Veterinary ground
J P Badminton Academy
Atria Institute of Technology
End of Project
Km 2+228
Km 2+180
Towards Mekri Circle
Safa Fish & Seafood

REVISED FINAL DETAILED PROJECT REPORT

VOLUME – III - DRAWINGS

SEPTEMBER 2025

Bengaluru Smart Infrastructure Limited

Rodic Consultants Pvt. Ltd

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Sr.No.	DRAWINGS	DRAWING NO.
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	TYPICAL CROSS SECTION	
3	TYPICAL CROSS SECTION	RC/1640/HO/HBT/TU/DWG/TCS/ 01 of 07/R0
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4	HORIZONTAL & VERTICAL ALIGNMENT REPORT	RC/1640/HO/HBT/TU/DWG/HAR/VAR/ 01 of 03/R0
	PLAN AND LONGITUDINAL PROFILE	
5	PLAN & PROFILE TUNNEL	RC/1640/HO/HBT/TU/DWG/P&P /01 of 08/R0
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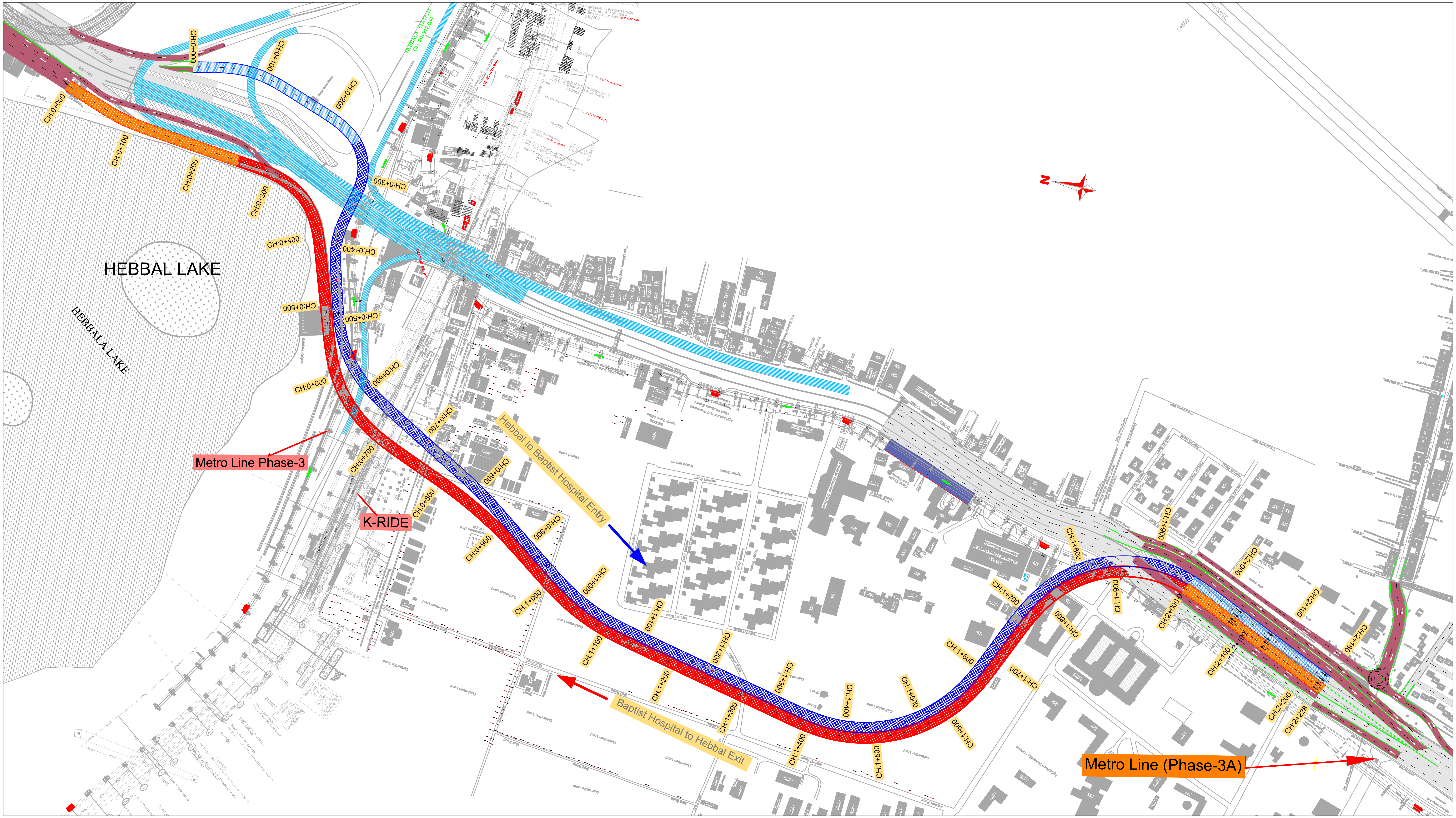
8	GEOTECHNICAL INVESTIGATION PLAN	RC/1640/HO/HBT/TU/DWG/GIN /01 of 01/R0

KEY PLAN
(HEBBAL TO BAPTIST HOSPITAL


HEBBAL LAKE
HEBBALA LAKE
Metro Line Phase-3
K-RIDE
Hebbal to Baptist Hospital Entry
Baptist Hospital to Hebbal Exit
Metro Line (Phase-3A)
N
CH:0+000
CH:0+100
CH:0+200
CH:0+300
CH:0+400
CH:0+500
CH:0+600
CH:0+700
CH:0+800
CH:0+900
CH:1+000
CH:1+100
CH:1+200
CH:1+300
CH:1+400
CH:1+500
CH:1+600
CH:1+700
CH:1+800
CH:1+900
CH:2+000
CH:2+100
CH:2+180
CH:2+200
CH:2+228

Legend

Plan

Proposed Open Cut (Entry Ramp)	▤
Proposed Cut & Cover (Entry Ramp)	▦
Proposed Open Cut (Exit Ramp)	▥
Proposed Cut & Cover (Exit Ramp)	▩
Proposed Diversion	🟥

REVISION	DATE	AMENDMENT \ ISSUE DESCRIPTION
R0	Sep- 2025	-

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GOVERNMENT OF KARNATAKA

Bengaluru Smart Infrastructure Limited

AE/B-SMILE	
AEE/B-SMILE	
EE/B-SMILE	
EIC-B-SMILE	

CONSULTANT:

RODIC CONSULTANTS PVT. LTD.
1, JAI SINGH MARG (FIRST FLOOR), YMCA
CULTURAL CENTRE BUILDING
NEW DELHI - 110001 (INDIA)

REVISED FINAL DETAILED PROJECT REPORT

Designed:	RR	
Drawn:	SS	
Checked:	AT	
Approved:	HRY	

Scale :- NTS

Sheet size: A2

Project: Consultancy Service for Preparation for DPR for short length transitory 3 lane bi-directional vehicular underpass connecting Hebbal flyover junction to Veterinary college via GKVK premises

Drawing Title: KEY PLAN (HEBBAL TO BAPTIST HOSPITAL ENTRY) AND (BAPTIST HOSPITAL TO HEBBAL EXIT)

Drawing No.: RC/1640/HO/HBT/TU/DWG/PLAN01/R0

TCS SCHEDULE
(HEBBAL TO BAPTIST HOSPITAL ENTRY)
&
(BAPTIST HOSPITA TO LHEBBAL EXIT)

TCS Schedule

Hebbal to Baptist Hospital Entry

SL NO	Form	To	Length	TCS Type	Remarks
1	00+000	00+250	250	TCS-1	Open Ramp (3 lane)
2	00+250	00+627	377	TCS-2	Cut/Cover Section (3lane)
3	00+627	00+647	20	**As per GAD**	RUB
4	00+647	00+950	303	TCS-2	Cut/Cover Section (3lane)
5	00+950	01+950	1000	TCS-3	Left portion of Cut/Cover Section (3 lane)
6	01+950	02+180	230	TCS-4	left portion of Open Ramp Section (3 lane)
	Total Length		**2180**		

Baptist Hospital to Hebbal Exit

SL NO	Form	To	Length	TCS Type	Remarks
1	00+000	00+250	250	TCS-1A	Open Ramp (3 lane) with D Wall
2	00+250	00+565	315	TCS-2A	Cut/Cover Section (3lane) with D Wall
3	00+565	00+686	121	TCS-2	Cut/Cover Section (3lane)
4	00+686	00+706	20	**As per GAD**	RUB
5	00+706	01+000	294	TCS-2	Cut/Cover Section (3lane)
6	01+000	02+000	1000	TCS-3	Right portion of Cut/Cover Section (3 lane)
7	02+000	02+228	228	TCS-4	Right Portion of Open Ramp Section (3 lane)
	Total Length		**2228**		

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Bengaluru Smart Infrastructure Limited

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CONSULTANT:
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1, JAI SINGH MARG (FIRST FLOOR), YMCA
CULTURAL CENTRE BUILDING
NEW DELHI - 110001 (INDIA)

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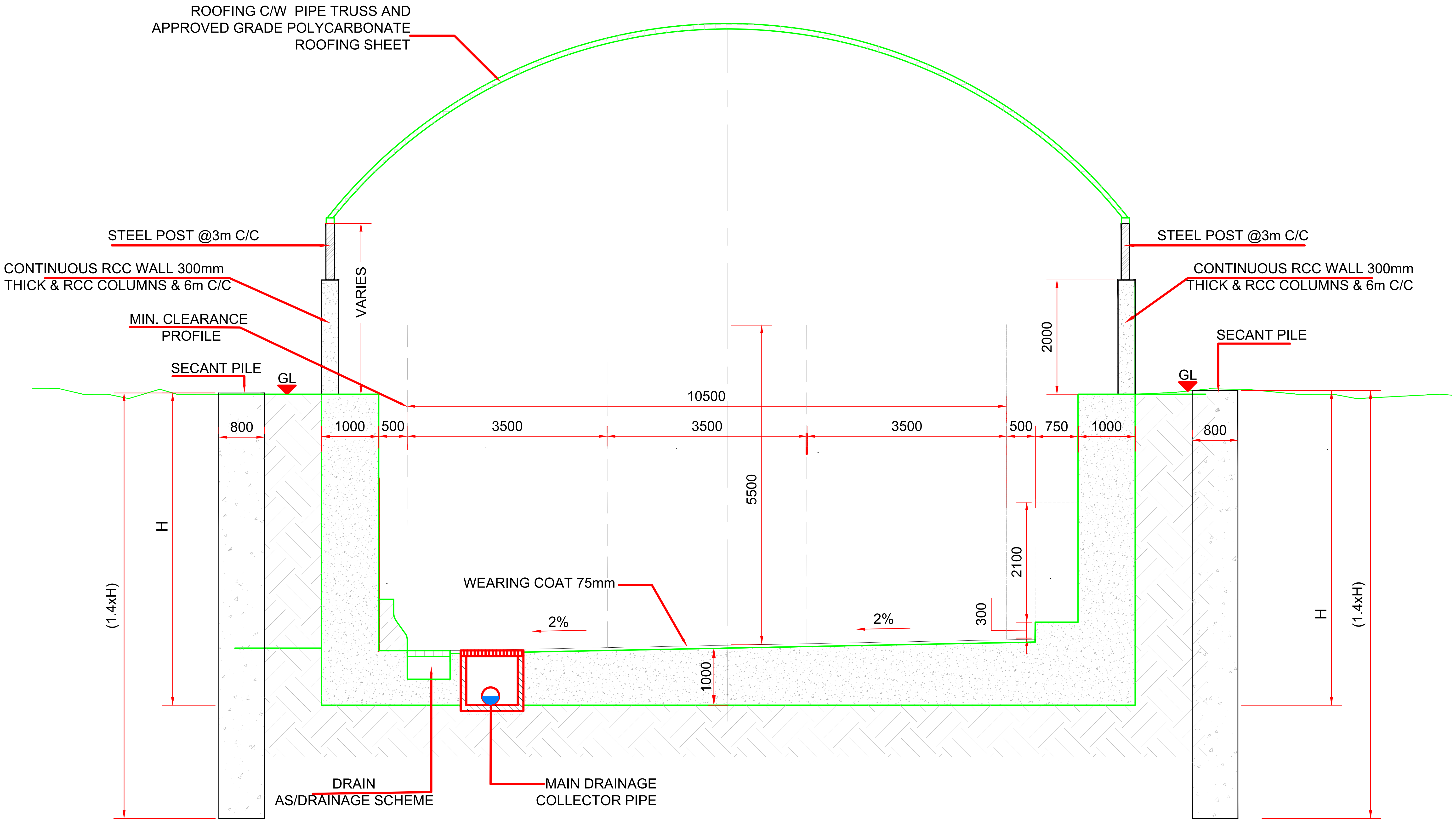
Sheet size: A2

Project	Consultancy Service for Preparation for DPR for short length transitory 3 lane bi-directional vehicular underpass connecting Hebbal flyover junction to Veterinary college via GKVK premises.
Drawing Title	TCS SCHEDULE
Drawing No.	RC/1640/HO/HBT/TU/DWG/TCS/01/R0

TYPICAL CROSS SECTION
(HEBBAL TO BAPTIST HOSPITAL ENTRY & EXIT)


ROOFING C/W PIPE TRUSS AND
APPROVED GRADE POLYCARBONATE
ROOFING SHEET
STEEL POST @3m C/C
CONTINUOUS RCC WALL 300mm
THICK & RCC COLUMNS & 6m C/C
MIN. CLEARANCE
PROFILE
SECANT PILE
GL
VARIES
STEEL POST @3m C/C
CONTINUOUS RCC WALL 300mm
THICK & RCC COLUMNS & 6m C/C
2000
SECANT PILE
GL
10500
800
1000
500
3500
3500
3500
500
750
1000
800
H
(1.4xH)
5500
2100
WEARING COAT 75mm
2%
2%
300
1000
H
(1.4xH)
DRAIN
AS/DRAINAGE SCHEME
MAIN DRAINAGE
COLLECTOR PIPE

TYPICAL CROSS SECTION-01

OPEN RAMP (3 LANES)

SCALE 1:50

NOTES:

1. ALL DIMENSIONS ARE IN mm.
2. THE STRUCTURAL DIMENSIONS SHOWN ARE INDICATIVE AND SUBJECTED TO CHANGE AS PER CONTRACTORS DETAILED DESIGN.
3. SIZING AND DETAILS OF CRASH BARRIER, DRAINAGE , UTILITY PIPE TRENCH ETC . MAY CHANGE AS PER CONTRACTORS DETAILED DESIGN.
4. WALKWAY CAN BE PLANNED ON EITHER SIDE OF THE ROAD AS PER DETAILED DESIGN.
5. DRAWING SHALL BE READ IN CONJUNCTION WITH THE PROJECT SPECIFICATIONS AND CONTRACT PROVISIONS.

MATERIALS:

GRADE OF CONCRETE - M35
GRADE OF STEEL Fe550D

REVISION	DATE	AMENDMENT \ ISSUE DESCRIPTION
R0	Sep:- 2025	-

CLIENT
GOVERNMENT OF KARNATAKA
Bengaluru Smart Infrastructure Limited

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AEE/B-SMILE
EE/B-SMILE
EIC-B-SMILE

CONSULTANT:
RODIC CONSULTANTS PVT. LTD.
1, JAI SINGH MARG (FIRST FLOOR), YMCA
CULTURAL CENTRE BUILDING
NEW DELHI - 110001 (INDIA)

REVISED FINAL DETAILED PROJECT REPORT

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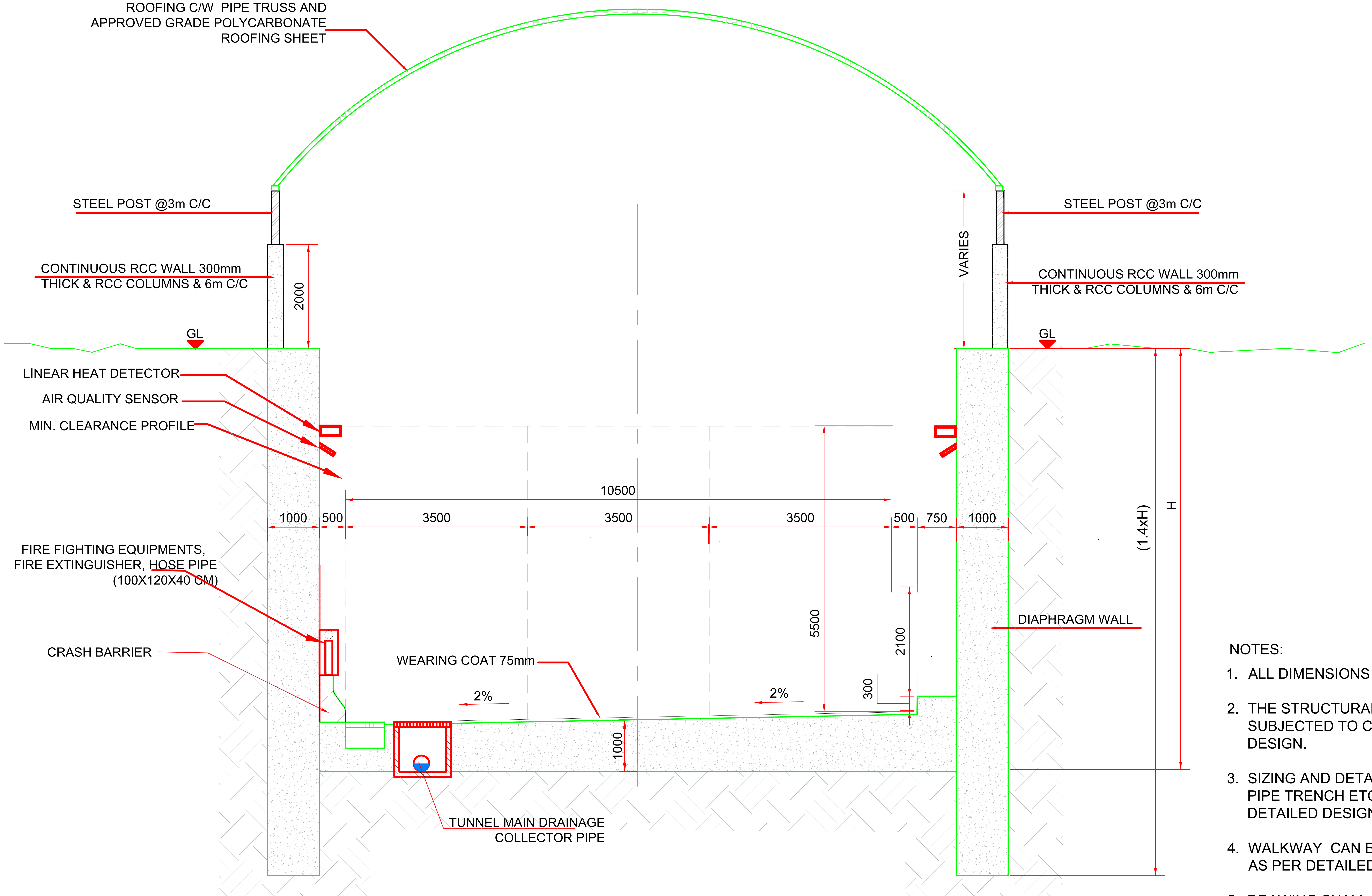
Scale :-
AS SHOWN
Sheet size: A2

Project: **Consultancy Service for Preparation for DPR for short length transitory 3 lane bi-directional vehicular underpass connecting Hebbal flyover junction to Veterinary college via GKVK premises.**

Drawing Title: TYPICAL CROSS SECTION

Drawing No.: RC/1640/HO/HBT/TU/DWG/TCS/01/R0


ROOFING C/W PIPE TRUSS AND APPROVED GRADE POLYCARBONATE ROOFING SHEET
STEEL POST @3m C/C
STEEL POST @3m C/C
CONTINUOUS RCC WALL 300mm THICK & RCC COLUMNS & 6m C/C
CONTINUOUS RCC WALL 300mm THICK & RCC COLUMNS & 6m C/C
VARIES
2000
GL
GL
LINEAR HEAT DETECTOR
AIR QUALITY SENSOR
MIN. CLEARANCE PROFILE
10500
1000
500
3500
3500
3500
500
750
1000
(1.4xH)
H
FIRE FIGHTING EQUIPMENTS, FIRE EXTINGUISHER, HOSE PIPE (100X120X40 CM)
5500
2100
DIAPHRAGM WALL
CRASH BARRIER
WEARING COAT 75mm
2%
2%
300
1000
TUNNEL MAIN DRAINAGE COLLECTOR PIPE

TYPICAL CROSS SECTION-01A

OPEN RAMP (3 LANE) WITH D WALL

SCALE 1:50

NOTES:

1. ALL DIMENSIONS ARE IN mm.
2. THE STRUCTURAL DIMENSIONS SHOWN ARE INDICATIVE AND SUBJECTED TO CHANGE AS PER CONTRACTORS DETAILED DESIGN.
3. SIZING AND DETAILS OF CRASH BARRIER, DRAINAGE , UTILITY PIPE TRENCH ETC . MAY CHANGE AS PER CONTRACTORS DETAILED DESIGN.
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MATERIALS:

GRADE OF CONCRETE - M35
GRADE OF STEEL Fe550D

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GOVERNMENT OF KARNATAKA
Bengaluru Smart Infrastructure Limited

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EE/B-SMILE
EIC-B-SMILE

CONSULTANT:
RODIC CONSULTANTS PVT. LTD.
1, JAI SINGH MARG (FIRST FLOOR), YMCA
CULTURAL CENTRE BUILDING
NEW DELHI - 110001 (INDIA)

REVISED FINAL DETAILED PROJECT REPORT

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Checked:	AT
Approved:	HRY

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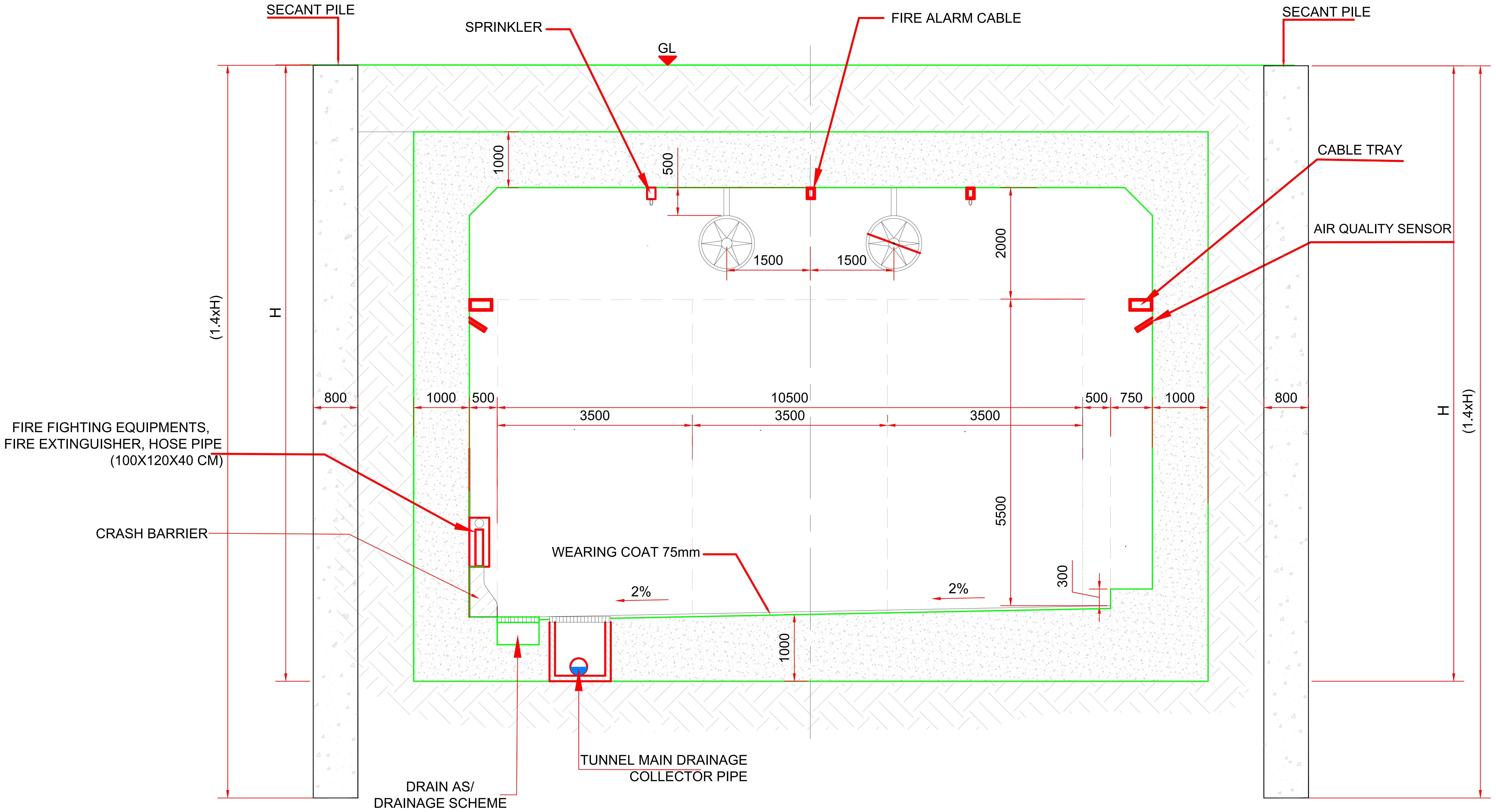
Sheet size: A2

Project	**Consultancy Service for Preparation for DPR for short length transitory 3 lane bi-directional vehicular underpass connecting Hebbal flyover junction to Veterinary college via GKVK premises.**
Drawing Title	TYPICAL CROSS SECTION
Drawing No.	RC/1640/HO/HBT/TU/DWG/TCS/02/R0


SECANT PILE
SPRINKLER
GL
FIRE ALARM CABLE
SECANT PILE
CABLE TRAY
AIR QUALITY SENSOR
1000
500
1500
1500
2000
(1.4xH)
H
800
1000
500
10500
500
750
1000
800
3500
3500
3500
H
(1.4xH)
FIRE FIGHTING EQUIPMENTS,
FIRE EXTINGUISHER, HOSE PIPE
(100X120X40 CM)
5500
CRASH BARRIER
WEARING COAT 75mm
300
2%
2%
1000
DRAIN AS/
DRAINAGE SCHEME
TUNNEL MAIN DRAINAGE
COLLECTOR PIPE

TYPICAL CROSS SECTION -02
CUT/COVER SECTION (3 LANES)
SCALE 1:50

NOTES:

1. ALL DIMENSIONS ARE IN mm.
2. THE STRUCTURAL DIMENSIONS SHOWN ARE INDICATIVE AND SUBJECTED TO CHANGE AS PER CONTRACTORS DETAILED DESIGN. DETAILED DESIGN OF LINING SHALL BE DONE BY CONTRACTOR.
3. SIZING AND DETAILS OF CRASH BARRIER, DRAINAGE , UTILITY PIPE TRENCH ETC . MAY CHANGE AS PER CONTRACTORS DETAILED DESIGN.
4. WALKWAY CAN BE PLANNED ON EITHER SIDE OF THE ROAD AS PER DETAILED DESIGN.
5. DRAWING SHALL BE READ IN CONJUNCTION WITH THE PROJECT SPECIFICATIONS AND CONTRACT PROVISIONS.

MATERIALS:

GRADE OF CONCRETE - M35
GRADE OF STEEL Fe550D

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GOVERNMENT OF KARNATAKA
Bengaluru Smart Infrastructure Limited

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AEE/B-SMILE
EE/B-SMILE
EIC-B-SMILE

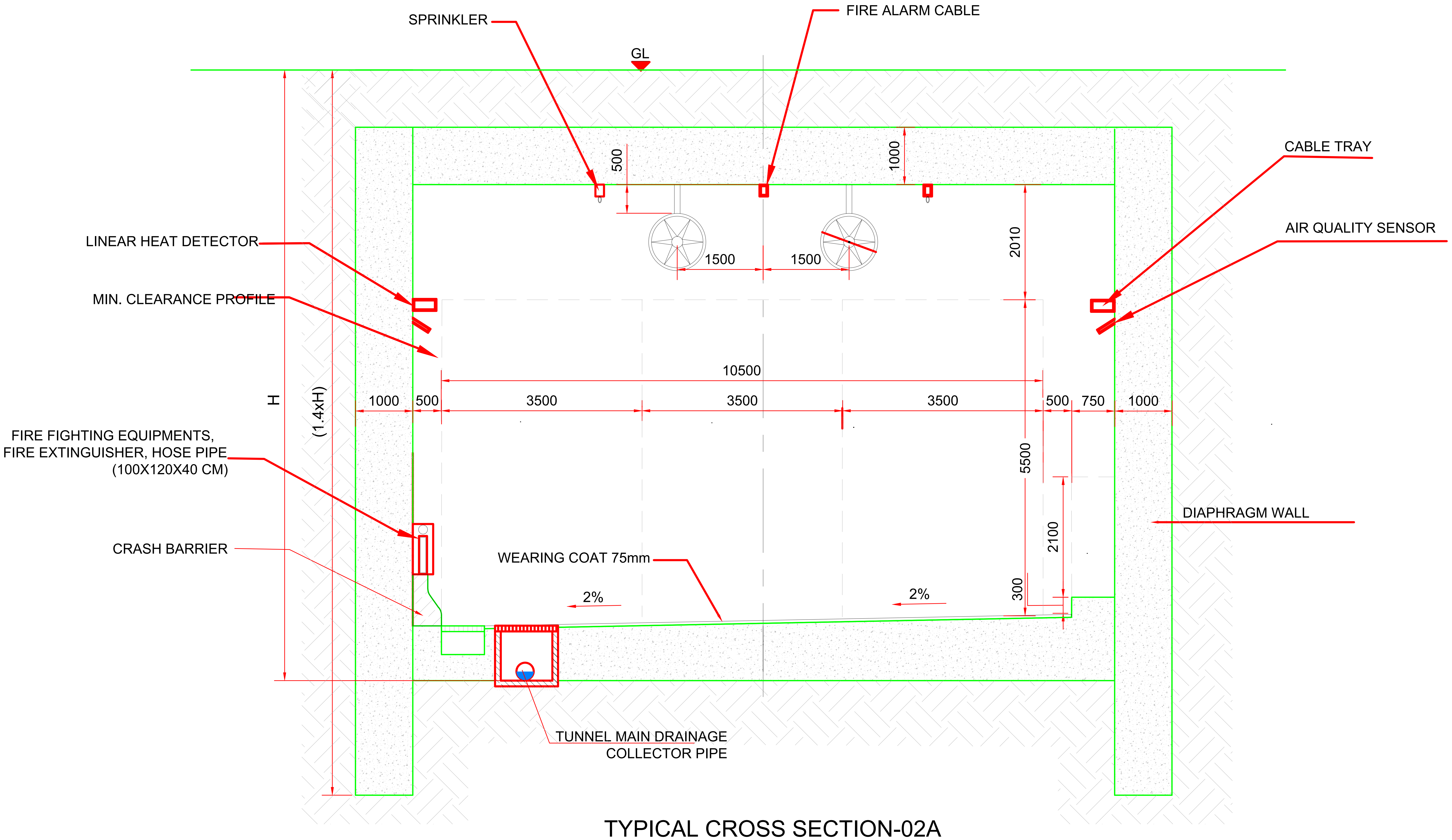
CONSULTANT:
RODIC CONSULTANTS PVT. LTD.
1, JAI SINGH MARG (FIRST FLOOR), YMCA
CULTURAL CENTRE BUILDING
NEW DELHI - 110001 (INDIA)

REVISED FINAL DETAILED PROJECT REPORT

Designed:	RR	Rajesh Ranjan
Drawn:	SS	
Checked:	AT	
Approved:	HRY	

Scale :-
AS SHOWN
Sheet size: A2

Project	**Consultancy Service for Preparation for DPR for short length transitory 3 lane bi-directional vehicular underpass connecting Hebbal flyover junction to Veterinary college via GKVK premises.**
Drawing Title	TYPICAL CROSS SECTION
Drawing No.	RC/1640/HO/HBT/TU/DWG/TCS/03/R0


SPRINKLER
FIRE ALARM CABLE
GL
CABLE TRAY
AIR QUALITY SENSOR
LINEAR HEAT DETECTOR
MIN. CLEARANCE PROFILE
500
1000
1500
1500
2010
10500
H
(1.4xH)
1000
500
3500
3500
3500
500
750
1000
5500
FIRE FIGHTING EQUIPMENTS,
FIRE EXTINGUISHER, HOSE PIPE
(100X120X40 CM)
DIAPHRAGM WALL
2100
CRASH BARRIER
WEARING COAT 75mm
2%
2%
300
TUNNEL MAIN DRAINAGE
COLLECTOR PIPE

TYPICAL CROSS SECTION-02A
CUT/COVER SECTION (3LANE) WITH D WALL
SCALE 1:50

NOTES:

1. ALL DIMENSIONS ARE IN mm.
2. THE STRUCTURAL DIMENSIONS SHOWN ARE INDICATIVE AND SUBJECTED TO CHANGE AS PER CONTRACTORS DETAILED DESIGN. DETAILED DESIGN OF LINING SHALL BE DONE BY CONTRACTOR.
3. SIZING AND DETAILS OF CRASH BARRIER, DRAINAGE , UTILITY PIPE TRENCH ETC . MAY CHANGE AS PER CONTRACTORS DETAILED DESIGN.
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MATERIALS:
GRADE OF CONCRETE - M35
GRADE OF STEEL Fe550D

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CLIENT
GOVERNMENT OF KARNATAKA
Bengaluru Smart Infrastructure Limited

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AEE/B-SMILE	
EE/B-SMILE	
EIC-B-SMILE	

CONSULTANT:
RODIC CONSULTANTS PVT. LTD.
1, JAI SINGH MARG (FIRST FLOOR), YMCA
CULTURAL CENTRE BUILDING
NEW DELHI - 110001 (INDIA)

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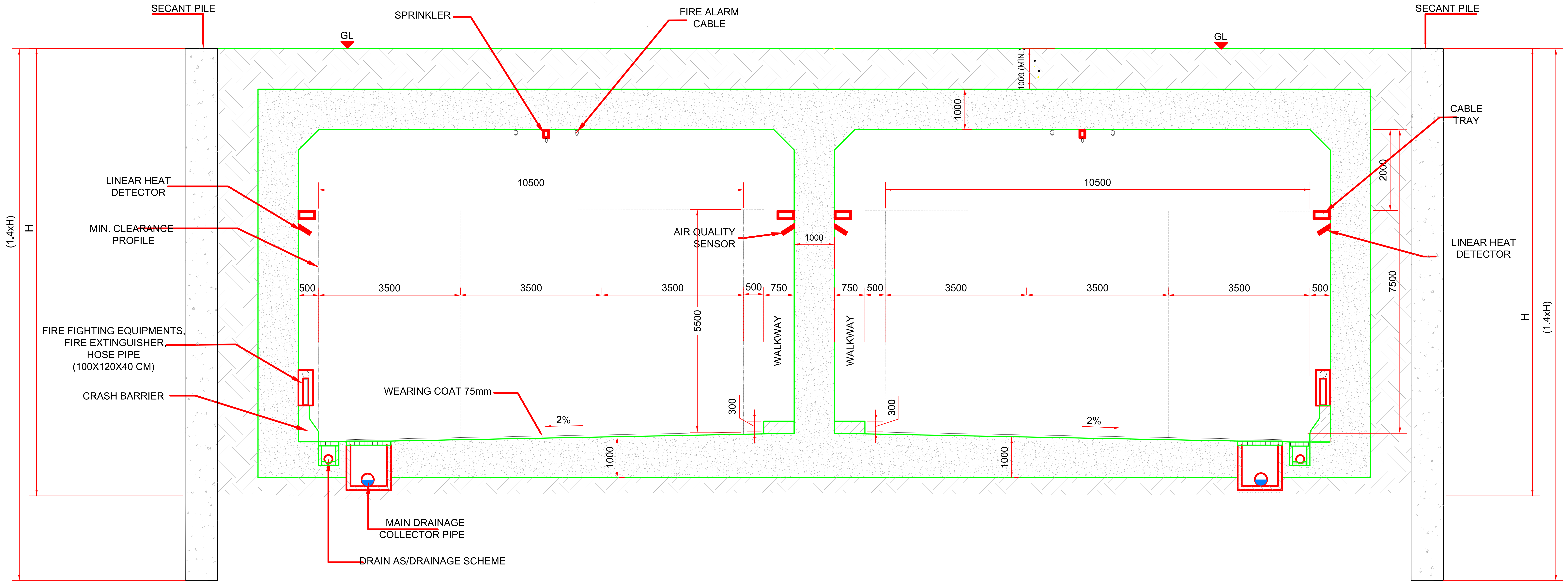
Project	**Consultancy Service for Preparation for DPR for short length transitory 3 lane bi-directional vehicular underpass connecting Hebbal flyover junction to Veterinary college via GKVK premises.**
Drawing Title	TYPICAL CROSS SECTION
Drawing No.	RC/1640/HO/HBT/TU/DWG/TCS/04/R0


SECANT PILE
SPRINKLER
FIRE ALARM CABLE
GL
GL
1000 (MIN.)
1000
SECANT PILE
CABLE TRAY
2000
LINEAR HEAT DETECTOR
MIN. CLEARANCE PROFILE
10500
10500
AIR QUALITY SENSOR
1000
LINEAR HEAT DETECTOR
(1.4xH)
H
500
3500
3500
3500
500
750
750
500
3500
3500
3500
500
7500
5500
WALKWAY
WALKWAY
H
(1.4xH)
FIRE FIGHTING EQUIPMENTS, FIRE EXTINGUISHER, HOSE PIPE (100X120X40 CM)
CRASH BARRIER
WEARING COAT 75mm
2%
300
300
2%
1000
1000
MAIN DRAINAGE COLLECTOR PIPE
DRAIN AS/DRAINAGE SCHEME

TYPICAL CROSS SECTION-03
CUT AND COVER (3 LANE+MEDIAN WALL+ 3 LANE)
SCALE 1:50

NOTES:

1. ALL DIMENSIONS ARE IN mm.
2. THE STRUCTURAL DIMENSIONS SHOWN ARE INDICATIVE AND SUBJECTED TO CHANGE AS PER CONTRACTOR'S DETAILED DESIGN.
3. SIZING AND DETAILS OF TYPICAL DETAILS OF CRASH BARRIER , UTILITY PIPE TRENCH , MAIN DRAINAGE ETC. MAY CHANGE AS PER CONTRACTOR'S DETAILED DESIGN.
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5. DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE PROJECT SPECIFICATIONS AND CONTRACT PROVISIONS.

MATERIALS: -

GRADE OF CONCRETE -M35 ,
STEEL GRADE Fe550D

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GOVERNMENT OF KARNATAKA
Bengaluru Smart Infrastructure Limited

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CONSULTANT:
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CULTURAL CENTRE BUILDING
NEW DELHI - 110001 (INDIA)

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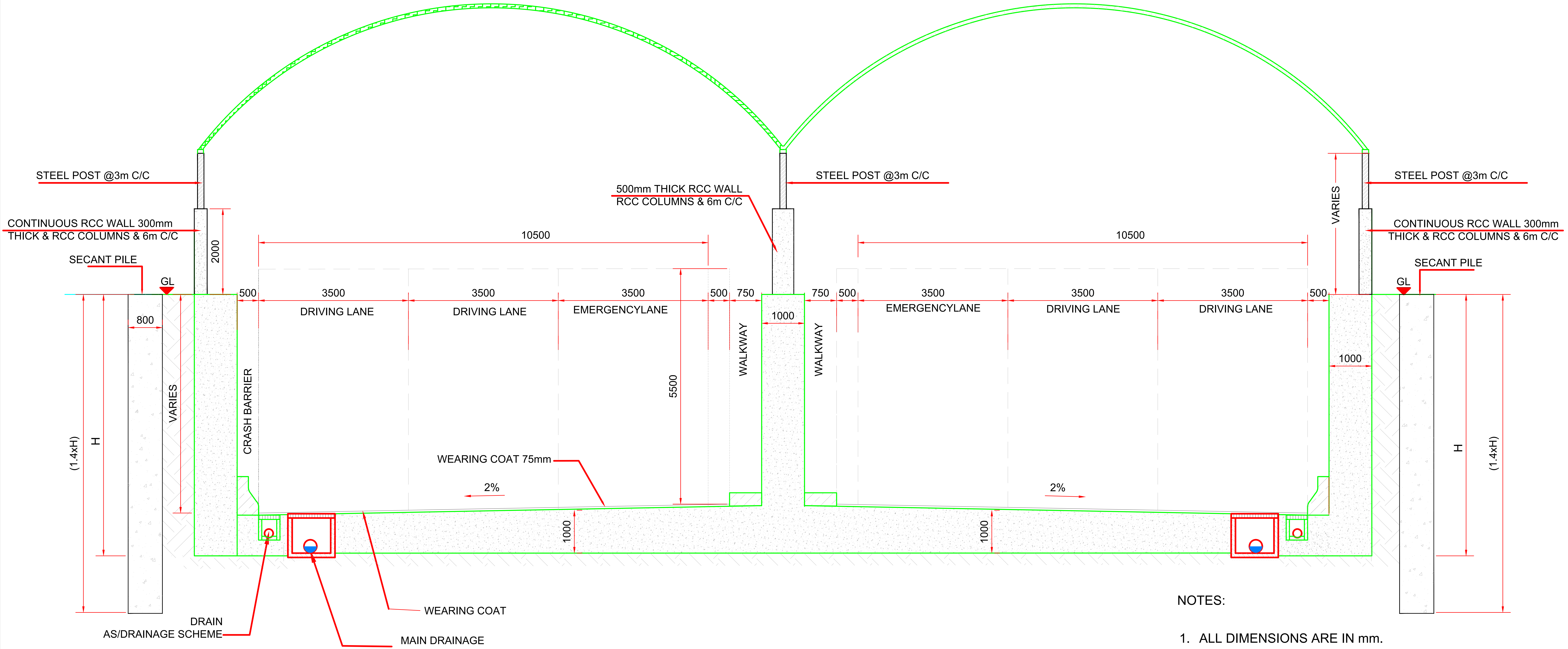
Project: **Consultancy Service for Preparation for DPR for short length transitory 3 lane bi-directional vehicular underpass connecting Hebbal flyover junction to Veterinary college via GKVK premises.**

Drawing Title: TYPICAL CROSS SECTION

Drawing No.: RC/1640/HO/HBT/TU/DWG/TCS/ 05/R0


STEEL POST @3m C/C
CONTINUOUS RCC WALL 300mm THICK & RCC COLUMNS & 6m C/C
SECANT PILE
GL
800
2000
VARIES
(1.4xH)
H
500
3500
DRIVING LANE
3500
DRIVING LANE
3500
EMERGENCYLANE
500
750
10500
500mm THICK RCC WALL RCC COLUMNS & 6m C/C
STEEL POST @3m C/C
1000
750
500
3500
EMERGENCYLANE
3500
DRIVING LANE
3500
DRIVING LANE
500
10500
VARIES
STEEL POST @3m C/C
CONTINUOUS RCC WALL 300mm THICK & RCC COLUMNS & 6m C/C
SECANT PILE
GL
1000
H
(1.4xH)
CRASH BARRIER
5500
WALKWAY
WALKWAY
WEARING COAT 75mm
2%
2%
1000
1000
DRAIN AS/DRAINAGE SCHEME
MAIN DRAINAGE COLLECTOR PIPE
WEARING COAT

TYPICAL CROSS SECTION -04

OPEN RAMP SECTION 3LANE+MEDIAN WALL+3LANE

SCALE 1:50

NOTES:

1. ALL DIMENSIONS ARE IN mm.
2. THE STRUCTURAL DIMENSIONS SHOWN ARE INDICATIVE AND SUBJECTED TO CHANGE AS PER CONTRACTOR'S DETAILED DESIGN.
3. SIZING AND DETAILS OF TYPICAL DETAILS OF CRASH BARRIER , UTILITY PIPE TRENCH , MAIN DRAINAGE ETC. MAY CHANGE AS PER CONTRACTOR'S DETAILED DESIGN.
4. WALKWAY CAN BE PLANNED ON EITHER SIDE OF THE ROAD AS PER DETAILED DESIGN .
5. DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE PROJECT SPECIFICATIONS AND CONTRACT PROVISIONS.

MATERIALS: -
GRADE OF CONCRETE -M35 , STEEL GRADE Fe550D

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AEE/B-SMILE
EE/B-SMILE
EIC-B-SMILE

CONSULTANT:
RODIC CONSULTANTS PVT. LTD.
1, JAI SINGH MARG (FIRST FLOOR), YMCA
CULTURAL CENTRE BUILDING
NEW DELHI - 110001 (INDIA)

REVISED FINAL DETAILED PROJECT REPORT

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Sheet size: A2

Project
Consultancy Service for Preparation for DPR for short length transitory 3 lane bi-directional vehicular underpass connecting Hebbal flyover junction to Veterinary college via GKVK premises.

Drawing Title
TYPICAL CROSS SECTION

Drawing No.
RC/1640/HO/HBT/TU/DWG/TCS/ 06/R0

HORIZONTAL ALIGNMENT REPORT
(HEBBAL TO BAPTIST HOSPITAL ENTRY)
&
(BAPTIST HOSPITA TO LHEBBAL EXIT)

Horizontal Alignment Report (HEBBAL TO BAPTIST HOSPITAL ENTRY)

HIP/Curve No.	HIP		Deflection	Element	Start			End			Length	Chord Length	Bearing	Radius	Design Speed (Kmph)	Hand Of Arc
	Easting	Northing			Chainage	Easting	Northing	Chainage	Easting	Northing						
				Straight	00+000	781078.87	1443573.794	00+015	781081.883	1443559.001	15.097		S 11° 30' 34.1426" E			
				Transition	00+015	781081.883	1443559.001	00+060	781088.64	1443514.557	45	44.955				
1	781089.61	1443495.57	14° 26' 59.5873"	Arc	00+060	781088.64	1443514.557	00+098	781085.805	1443476.934	37.83			150	50	RIGHT
				Transition	00+098	781085.805	1443476.934	00+143	781072.463	1443434.004	45	44.955				
				Straight	00+143	781072.463	1443434.004	00+186	781057.722	1443393.786	42.835		S 20° 07' 44.8866" W			
				Transition	00+186	781057.722	1443393.786	00+246	781029.506	1443341.388	60	59.512				
2	781008.11	1443319.76	46° 58' 47.3489"	Arc	00+246	781029.506	1443341.388	00+303	780977.704	1443320.642	57.397			70	40	RIGHT
				Transition	00+303	780977.704	1443320.642	00+333	780948.207	1443325.764	30	29.939				
				Straight	00+333	780948.207	1443325.764	00+343	780939.06	1443328.035	9.424		N 76° 03' 28.9604" W			
				Transition	00+343	780939.06	1443328.035	00+388	780894.796	1443335.558	45	44.899				
3	780891.68	1443335.62	03° 34' 27.5873"	Arc	00+388	780894.796	1443335.558	00+394	780888.56	1443335.478	6.238			100	60	LEFT
				Transition	00+394	780888.56	1443335.478	00+439	780844.504	1443326.819	45	44.899				
				Straight	00+439	780844.504	1443326.819	00+460	780824.215	1443321.224	21.045		S 74° 35' 04.2895" W			
				Transition	00+460	780824.215	1443321.224	00+530	780758.456	1443297.69	70	69.844				
4	780735.34	1443285.27	19° 04' 11.8643"	Arc	00+530	780758.456	1443297.69	00+582	780717.545	1443265.973	52.005			156.25	60	LEFT
				Transition	00+582	780717.545	1443265.973	00+652	780678.365	1443208.153	70	69.844				
				Straight	00+652	780678.365	1443208.153	00+768	780620.359	1443107.058	116.555		S 29° 50' 45.7919" W			
				Transition	00+768	780620.359	1443107.058	00+798	780605.106	1443081.227	30	29.998				
5	780600.83	1443074.38	02° 18' 46.7914"	Arc	00+798	780605.106	1443081.227	00+815	780596.276	1443067.708	16.148			400	60	RIGHT
				Transition	00+815	780596.276	1443067.708	00+845	780578.754	1443043.36	30	29.998				
				Straight	00+845	780578.754	1443043.36	00+938	780523.358	1442968.377	93.226		S 36° 27' 22.4438" W			
				Transition	00+938	780523.358	1442968.377	00+978	780500.35	1442935.667	40	39.991				
6	780479.61	1442903.06	15° 22' 36.4084"	Arc	00+978	780500.35	1442935.667	01+055	780468.266	1442866.118	76.822			286.25	60	LEFT
				Transition	01+055	780468.266	1442866.118	01+095	780458.316	1442827.385	40	39.991				
				Straight	01+095	780458.316	1442827.385	01+312	780409.161	1442615.702	217.315		S 13° 04' 23.0058" W			
				Transition	01+312	780409.161	1442615.702	01+372	780398.756	1442556.681	60	59.931				
7	780391.53	1442449.13	60° 07' 11.2417"	Arc	01+372	780398.756	1442556.681	01+567	780481.182	1442389.287	195.43			186.25	60	LEFT
				Transition	01+567	780481.182	1442389.287	01+627	780534.306	1442361.548	60	59.931				
				Straight	01+627	780534.306	1442361.548	01+660	780563.766	1442348.125	32.373		S 65° 30' 15.9588" E			
				Transition	01+660	780563.766	1442348.125	01+740	780633.547	1442309.412	80	79.8				
8	780714.92	1442245.66	62° 58' 55.0416"	Arc	01+740	780633.547	1442309.412	01+925	780695.093	1442144.206	185.497			168.75	60	RIGHT
				Transition	01+925	780695.093	1442144.206	02+005	780667.649	1442069.273	80	79.8				
				Straight	02+005	780667.649	1442069.273	02+180	780594.803	1441910.457	174.725		S 24° 38' 23.8798" W			

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GOVERNMENT OF KARNATAKA

Bengaluru Smart Infrastructure Limited

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CONSULTANT:

RODIC CONSULTANTS PVT. LTD.
1, JAI SINGH MARG (FIRST FLOOR), YMCA
CULTURAL CENTRE BUILDING
NEW DELHI - 110001 (INDIA)

REVISED FINAL DETAILED PROJECT REPORT

Designed:	RR	
Drawn:	SS	
Checked:	AT	
Approved:	HRY	

Scale :- N.T.S

Sheet size: A2

Project	Consultancy Service for Preparation for DPR for short length transitory 3 lane bi-directional vehicular underpass connecting Hebbal flyover junction to Veterinary college via GKVK premises.
Drawing Title	Horizontal Alignment Report (Hebbal to Baptist Hospital Entry)
Drawing No.	RC/1640/HO/HBT/TU/DWG/HAR/01/R0

Horizontal Alignment Report (Baptist Hopistal to Hebbal Exit)

HIP/Curve No.	HIP		Deflection	Element	Start			End			Length	Chord Length	Bearing	Radius	Design Speed (Kmph)	Hand Of Arc
	Easting	Northing			Chainage	Easting	Northing	Chainage	Easting	Northing						
				Straight	00+000	781019.097	1443732.476	00+046	781002.98	1443689.144	46.232		S 20° 24' 08.0757" W			
				Transition	00+046	781002.98	1443689.144	00+081	780991.744	1443656.009	35	34.988				
1	780990.27	1443650.64	03° 11' 22.7090"	Arc	00+081	780991.744	1443656.009	00+092	780989.09	1443645.198	11.134			200	50	LEFT
				Transition	00+092	780989.09	1443645.198	00+127	780983.703	1443610.627	35	34.988				
				Straight	00+127	780983.703	1443610.627	00+263	780966.797	1443476.535	135.153		S 07° 11' 09.0256" W			
				Transition	00+263	780966.797	1443476.535	00+338	780947.369	1443404.693	75	74.423				
2	780940.38	1443393.09	17° 07' 25.3105"	Arc	00+338	780947.369	1443404.693	00+364	780930.28	1443384.051	26.898			90	50	RIGHT
				Transition	00+364	780930.28	1443384.051	00+439	780863.327	1443351.554	75	74.423				
				Straight	00+439	780863.327	1443351.554	00+528	780779.242	1443324.325	88.383		S 72° 03' 21.6747" W			
				Transition	00+528	780779.242	1443324.325	00+598	780714.405	1443298.293	70	69.868				
3	780680.75	1443279.07	25° 41' 18.5121"	Arc	00+598	780714.405	1443298.293	00+674	780658.755	1443247.149	76.219			170	60	LEFT
				Transition	00+674	780658.755	1443247.149	00+744	780627.355	1443184.733	70	69.868				
				Straight	00+744	780627.355	1443184.733	00+792	780608.628	1443140.13	48.375		S 22° 46' 30.5954" W			
				Transition	00+792	780608.628	1443140.13	00+812	780600.784	1443121.733	20	20				
4	780576.49	1443066.47	11° 29' 25.2630"	Arc	00+812	780600.784	1443121.733	00+933	780541.677	1443017.156	120.327			600	60	RIGHT
				Transition	00+933	780541.677	1443017.156	00+953	780529.961	1443000.947	20	20				
				Straight	00+953	780529.961	1443000.947	00+984	780511.404	1442975.568	31.44		S 36° 10' 31.3519" W			
				Transition	00+984	780511.404	1442975.568	01+024	780488.521	1442942.769	40	39.992				
5	780466.7	1442908.32	15° 28' 58.2070"	Arc	01+024	780488.521	1442942.769	01+105	780454.858	1442869.291	81.068			300	60	LEFT
				Transition	01+105	780454.858	1442869.291	01+145	780444.963	1442830.543	40	39.992				
				Straight	01+145	780444.963	1442830.543	01+363	780395.838	1442618.657	217.506		S 13° 03' 11.1707" W			
				Transition	01+363	780395.838	1442618.657	01+423	780385.235	1442559.663	60	59.94				
6	780376.01	1442441.34	61° 22' 07.6876"	Arc	01+423	780385.235	1442559.663	01+637	780475.439	1442376.552	214.218			200	60	LEFT
				Transition	01+637	780475.439	1442376.552	01+697	780528.674	1442349.005	60	59.94				
				Straight	01+697	780528.674	1442349.005	01+729	780558.001	1442335.642	32.228		S 65° 30' 15.9588" E			
				Transition	01+729	780558.001	1442335.642	01+809	780627.477	1442296.46	80	79.763				
7	780697.57	1442239.13	60° 35' 14.0458"	Arc	01+809	780627.477	1442296.46	01+973	780682.048	1442149.917	163.904			155	60	RIGHT
				Transition	01+973	780682.048	1442149.917	02+053	780655.123	1442074.836	80	79.763				
				Straight	02+053	780655.123	1442074.836	02+228	780582.235	1441916.036	174.728		S 24° 39' 17.3418" W			

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CONSULTANT:
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CULTURAL CENTRE BUILDING
NEW DELHI - 110001 (INDIA)

REVISED FINAL DETAILED PROJECT REPORT

Designed: RR
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Scale :- N.T.S
Sheet size: A2

Project: Consultancy Service for Preparation for DPR for short length transitory 3 lane bi-directional vehicular underpass connecting Hebbal flyover junction to Veterinary college via GKVK premises.

Drawing Title: Horizontal Alignment Report
(Baptist Hopistal to Hebbal Exit)

Drawing No. RC/1640/HO/HBT/TU/DWG/HAR/02/R0

VERTICAL ALIGNMENT REPORT
(HEBBAL TO BAPTIST HOSPITAL ENTRY)
&
(BAPTIST HOSPITA TO LHEBBAL EXIT)

Vertical Alignment:Baptist to hebbal Exit

PVI No.	PVI		Element	Start		End		Length	Grade Out	Type
	Chainage	RL		Chainage	RL	Chainage	RL			
				00+000	894.661					
1	2+62.684	883.432	Curve	00+228	884.928	00+298	883.267	70		Valley
			Grade	00+298	883.267	00+329	883.121	31.128	-0.47%	
2	4+10.205	882.739	Curve	00+329	883.121	00+492	883.567	162.786		Valley
			Grade	00+492	883.567	01+000	888.739	508.153	1.02%	
3	10+34.750	889.095	Curve	01+000	888.739	01+070	889.597	70		Valley
			Grade	01+070	889.597	01+404	894.392	334.627	1.43%	
4	14+54.377	895.109	Curve	01+404	894.392	01+504	896.303	100		Valley
			Grade	01+504	896.303	01+911	906.015	406.669	2.39%	
5	19+95.385	908.029	Curve	01+911	906.015	02+080	911.694	168.678		Valley
			Grade	02+080	911.694	02+228	918.13	148.089	4.35%	
				02+228	918.13					

Vertical Alignment:Hebbal to baptist Entry

PVI No.	PVI		Element	Start		End		Length	Grade Out	Type
	Chainage	RL		Chainage	RL	Chainage	RL			
				00+000	893.05					
1	2+49.976	883.165	Curve	00+163	886.618	00+337	883.767	174.621		Valley
			Grade	00+337	883.767	00+902	887.659	564.781	0.69%	
2	9+82.927	888.216	Curve	00+902	887.659	01+064	889.718	161.719		Valley
			Grade	01+064	889.718	01+377	895.542	313.572	1.86%	
3	14+77.358	897.4	Curve	01+377	895.542	01+577	899.437	200		Valley
			Grade	01+577	899.437	01+905	906.113	327.775	2.04%	
4	19+55.132	907.131	Curve	01+905	906.113	02+005	909.445	100		Valley
			Grade	02+005	909.445	02+180	917.537	174.83	4.63%	
				02+180	917.537					

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Project: Consultancy Service for Preparation for DPR for short length transitory 3 lane bi-directional vehicular underpass connecting Hebbal flyover junction to Veterinary college via GKVK premises.

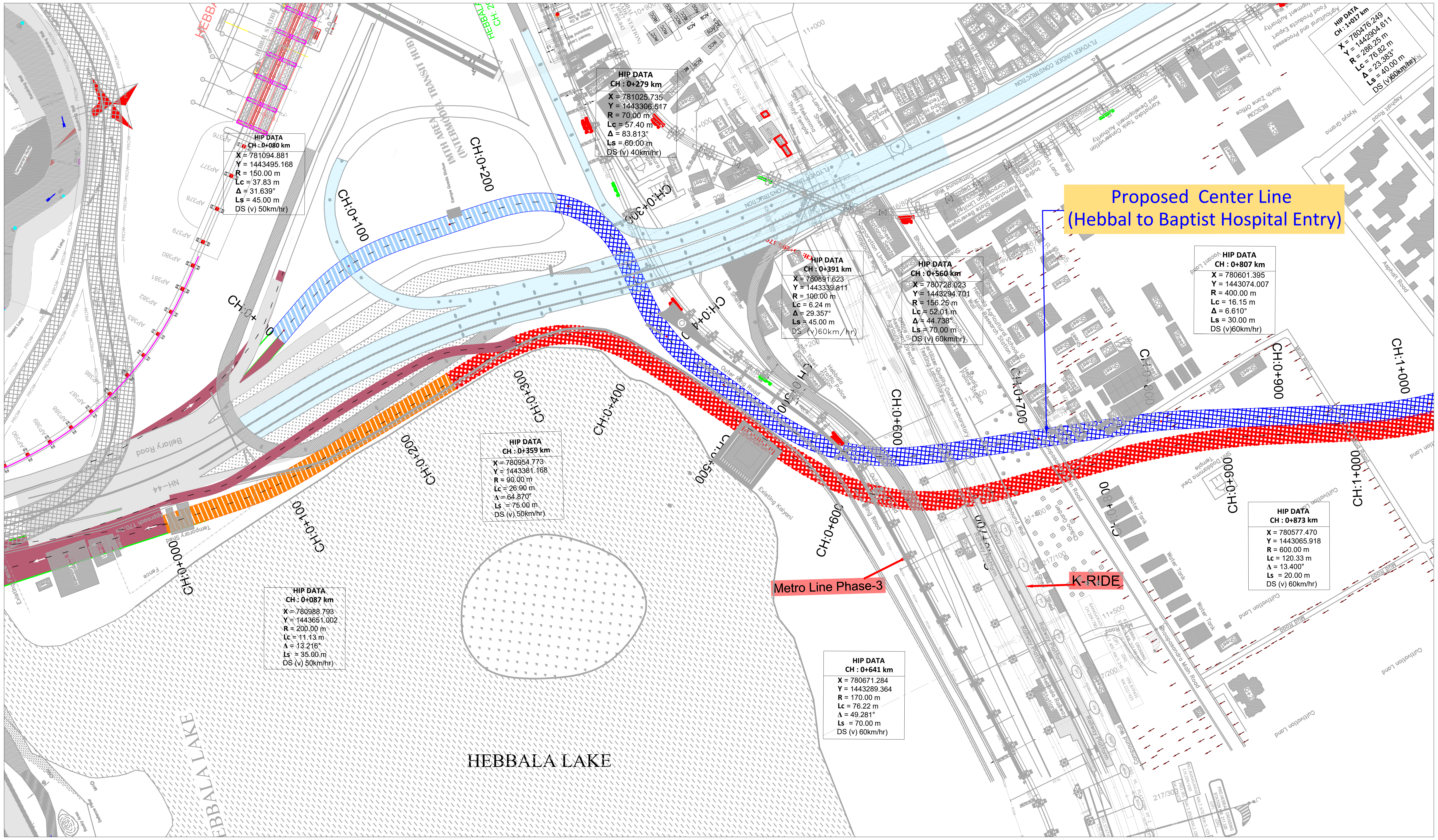
Drawing Title: Vertical Alignment Report
(Hebbal to Baptist Hospital Entry & Baptist Hopistal to Hebbal Exit)

Drawing No. RC/1640/HO/HBT/TU/DWG/HAR/01/R0

PLAN & PROFILE
(HEBBAL TO BAPTIST HOSPITAL ENTRY)

← HEBBAL

MEKHRI CIRCLE →



Proposed Center Line
(Hebbal to Baptist Hospital Entry)
HIP DATA
CH : 0+080 km
X = 781094.881
Y = 1443495.168
R = 150.00 m
Lc = 37.83 m
Δ = 31.639°
Ls = 45.00 m
DS (v) 50km/hr)
HIP DATA
CH : 0+279 km
X = 781025.735
Y = 1443306.517
R = 70.00 m
Lc = 57.40 m
Δ = 83.813°
Ls = 60.00 m
DS (v) 40km/hr)
HIP DATA
CH : 0+391 km
X = 780891.623
Y = 1443339.811
R = 100.00 m
Lc = 6.24 m
Δ = 29.357°
Ls = 45.00 m
DS (v)60km/hr)
HIP DATA
CH : 0+560 km
X = 780728.023
Y = 1443294.701
R = 156.25 m
Lc = 52.01 m
Δ = 44.738°
Ls = 70.00 m
DS (v) 60km/hr)
HIP DATA
CH : 0+807 km
X = 780601.395
Y = 1443074.007
R = 400.00 m
Lc = 16.15 m
Δ = 6.610°
Ls = 30.00 m
DS (v)60km/hr)
HIP DATA
CH : 1+017 km
X = 780476.249
Y = 1442904.611
R = 286.25 m
Lc = 76.82 m
Δ = 23.383°
Ls = 40.00 m
DS (v)60km/hr)
HIP DATA
CH : 0+359 km
X = 780954.773
Y = 1443381.168
R = 90.00 m
Lc = 26.90 m
Δ = 64.870°
Ls = 75.00 m
DS (v) 50km/hr)
HIP DATA
CH : 0+087 km
X = 780988.793
Y = 1443651.002
R = 200.00 m
Lc = 11.13 m
Δ = 13.216°
Ls = 35.00 m
DS (v) 50km/hr)
HIP DATA
CH : 0+641 km
X = 780671.284
Y = 1443289.364
R = 170.00 m
Lc = 76.22 m
Δ = 49.281°
Ls = 70.00 m
DS (v) 60km/hr)
HIP DATA
CH : 0+873 km
X = 780577.470
Y = 1443065.918
R = 600.00 m
Lc = 120.33 m
Δ = 13.400°
Ls = 20.00 m
DS (v) 60km/hr)
CH:0+100
CH:0+200
CH:0+300
CH:0+400
CH:0+600
CH:0+700
CH:0+900
CH:1+000
CH:0+000
CH:0+100
CH:0+200
CH:0+300
CH:0+400
CH:0+500
CH:0+600
CH:0+900
CH:1+000
Metro Line Phase-3
K-R!DE
HEBBALA LAKE
HEBBALA LAKE
Bellary Road
NH-44
Kempe Gowda Statue
FLYOVER UNDER CONSTRUCTION
Outer Ring Road
Bus Shelter
Hebbala Traffic Police Station
Hebbala Police Station
Public Toilet
Railway Platform
Hebbala Railway Station
Bhoopasandra Main Road
Water Tank
Cultivation Land
Mud Road
Asphalt Road
Nyaya Grama
Sri Doddamma Devi Temple
Existing Kalyani
Temporary Road
Fence
Shri Pilekamma Thayi Temple
Agricultural and Processed Food Products Export Development Authority
Karnataka State Beverages Corporation Limited
National Seeds Corporation Limited
Hebbala Agricultural School Main Research Station
Office of the Assistant Director Agriculture
Fertilizer Quality Control Laboratory

Legend

Plan

Proposed Open Cut (Entry Ramp)	▨
Proposed Cut & Cover (Entry Ramp)	▦
Proposed Open Cut (Exit Ramp)	▥
Proposed Cut & Cover (Exit Ramp)	🟥
Proposed Diversion	▬

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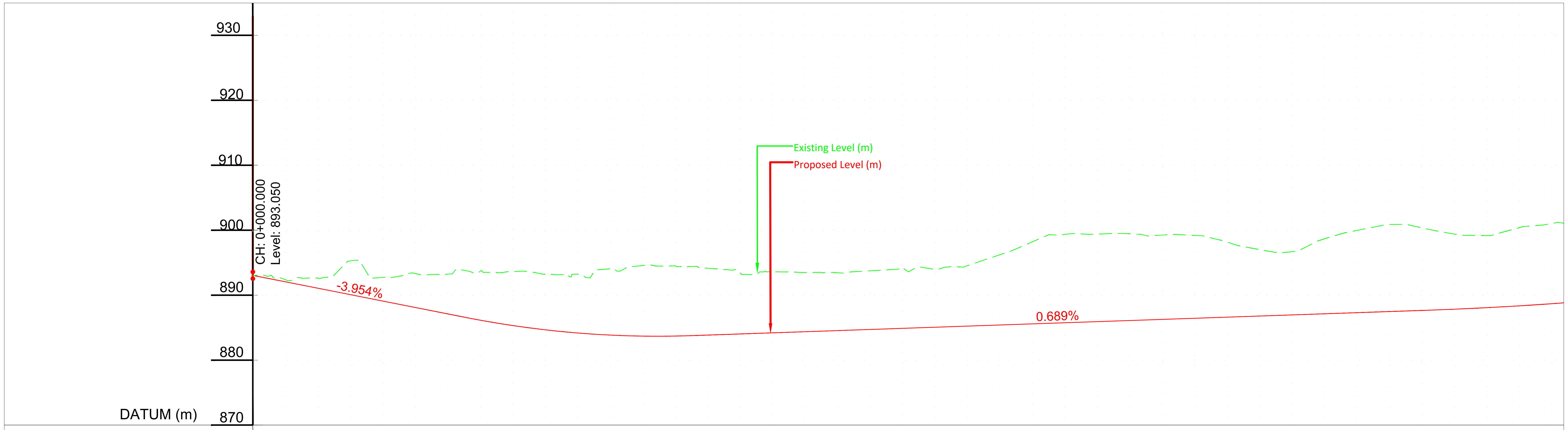
Scale :- H=:-1:2500
V=:-1:2500

Sheet size: A2

Project	Consultancy Service for Preparation for DPR for short length transitory 3 lane bi-directional vehicular underpass connecting Hebbal flyover junction to Veterinary college via GKVK premises.
Drawing Title	PLAN & PROFILE (HEBBAL TO BAPTIST HOSPITAL ENTRY) (Km.0+000 to Km.1+000)
Drawing No.	RC/1640/HO/HBT/TU/DWG/P&P/01/R0

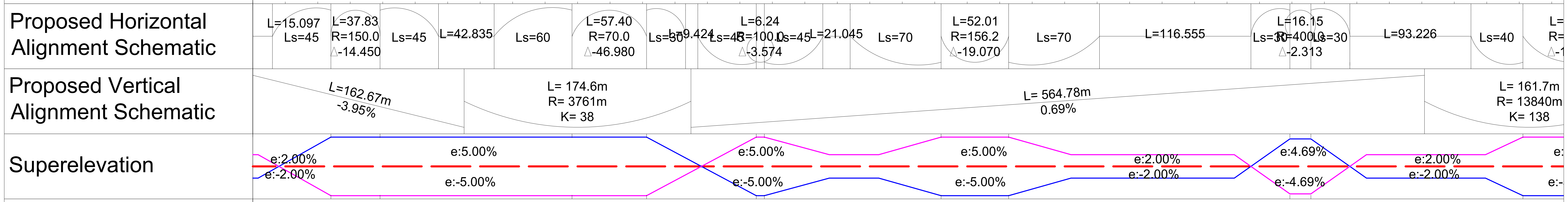
HEBBAL ← → MEKHRI CIRCLE



Proposed Levels (m)	893.050	892.061	891.072	890.084	889.095	888.107	887.118	886.150	885.327	884.669	884.178	883.854	883.695	883.702
Existing Levels (m)	893.050	892.378	892.619	895.268	892.736	893.336	893.234	893.654	893.640	893.237	893.235	894.043	894.558	894.510
Level Difference (m)	0.000	-0.317	-1.547	-5.184	-3.641	-5.229	-6.116	-7.504	-8.313	-8.568	-9.056	-10.189	-10.863	-10.807
Chainage	0+000	0+025	0+050	0+075	0+100	0+125	0+150	0+175	0+200	0+225	0+250	0+275	0+300	0+325

Proposed Levels (m)	883.855	884.027	884.199	884.371	884.544	884.716	884.888	885.060	885.233	885.405	885.577	885.749	885.922	886.094
Existing Levels (m)	894.142	893.485	893.597	893.476	893.456	893.739	894.041	894.001	894.525	896.206	898.196	899.343	899.396	899.447
Level Difference (m)	-10.287	-9.458	-9.398	-9.105	-8.913	-9.023	-9.153	-8.940	-9.292	-10.801	-12.619	-13.593	-13.474	-13.353
Chainage	0+350	0+375	0+400	0+425	0+450	0+475	0+500	0+525	0+550	0+575	0+600	0+625	0+650	0+675

Proposed Levels (m)	886.266	886.439	886.611	886.783	886.955	887.128	887.300	887.472	887.644	887.836	888.072	888.353	888.680
Existing Levels (m)	899.255	899.198	898.182	897.017	896.686	898.668	899.967	900.889	900.370	899.402	899.166	900.386	901.029
Level Difference (m)	-12.989	-12.759	-11.571	-10.233	-9.731	-11.540	-12.667	-13.417	-12.726	-11.567	-11.094	-12.033	-12.349
Chainage	0+700	0+725	0+750	0+775	0+800	0+825	0+850	0+875	0+900	0+925	0+950	0+975	1+000


Proposed Horizontal Alignment Schematic
L=15.097
Ls=45
L=37.83
R=150.0
△-14.450
Ls=45
L=42.835
Ls=60
L=57.40
R=70.0
△-46.980
Ls=30
L=9.424
Ls=45
L=6.24
R=100.0
△-3.574
Ls=45
L=21.045
Ls=70
L=52.01
R=156.2
△-19.070
Ls=70
L=116.555
Ls=30
L=16.15
R=400.0
△-2.313
Ls=30
L=93.226
Ls=40
L=
R=
△-1
Proposed Vertical Alignment Schematic
L=162.67m
-3.95%
L= 174.6m
R= 3761m
K= 38
L= 564.78m
0.69%
L= 161.7m
R= 13840m
K= 138
Superelevation
e:2.00%
e:-2.00%
e:5.00%
e:-5.00%
e:5.00%
e:-5.00%
e:5.00%
e:-5.00%
e:2.00%
e:-2.00%
e:4.69%
e:-4.69%
e:2.00%
e:-2.00%
e:
e:-

Legend

L Profile

Proposed Road Levels 🟥	K - Ratio Between vertical curve Length & Change of Gradient {Lc/(G2-G1)}
Existing Levels 🟩	e - Superelevation (%)
Lv - Length of Vertical Curve	D - Straight Length of Horizontal Alignment
L - Length of Grade(m)	Lc - Length of Circular Curve

REVISION	DATE	AMENDMENT \ ISSUE DESCRIPTION
R0	Sep:- 2025	-

CLIENT
GOVERNMENT OF KARNATAKA
Bengaluru Smart Infrastructure Limited

AE/B-SMILE
AEE/B-SMILE
EE/B-SMILE
EIC-B-SMILE

CONSULTANT:
RODIC CONSULTANTS PVT. LTD.
1, JAI SINGH MARG (FIRST FLOOR), YMCA
CULTURAL CENTRE BUILDING
NEW DELHI - 110001 (INDIA)

REVISED FINAL DETAILED PROJECT REPORT

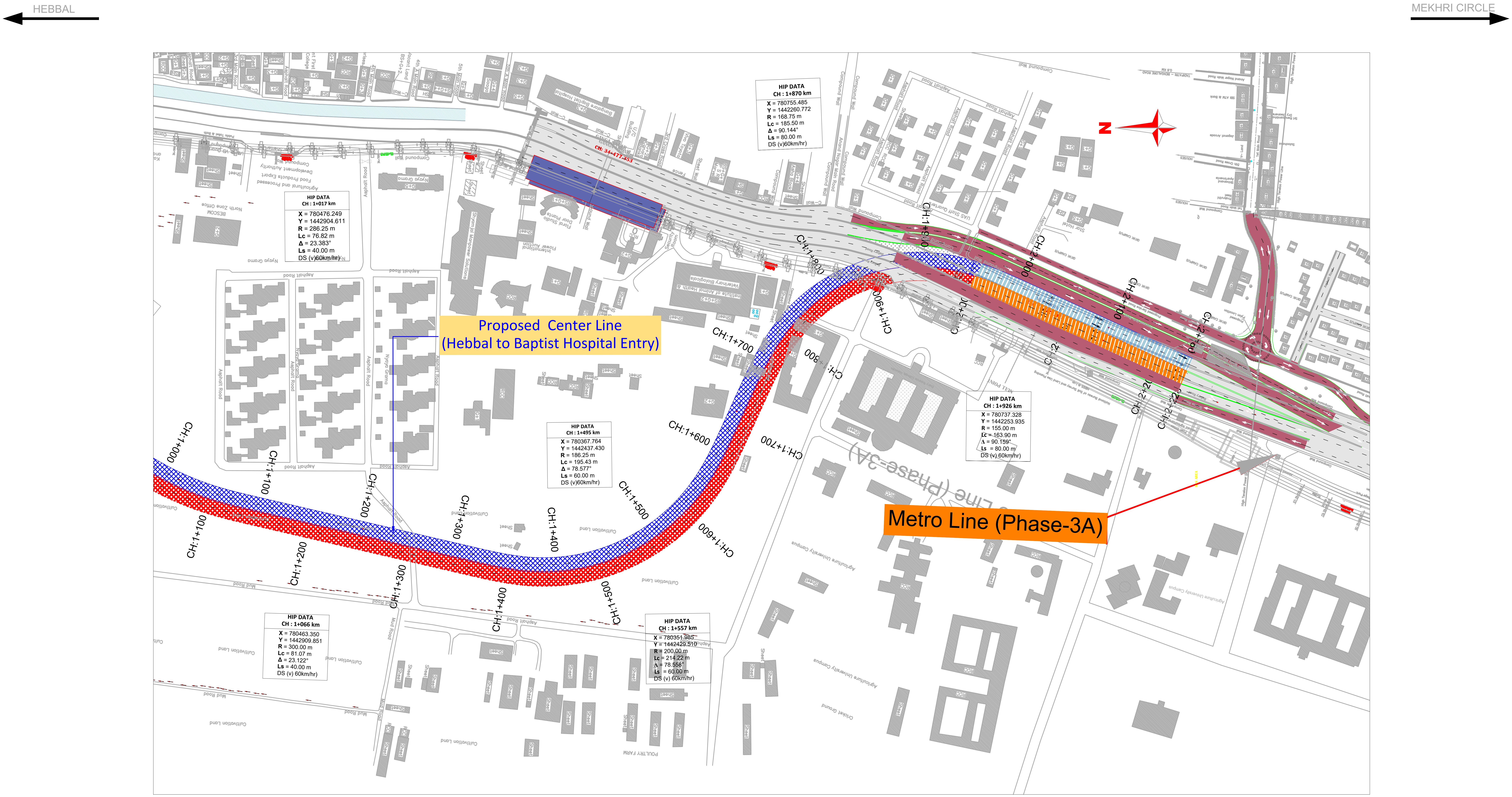
Designed:	RR
Drawn:	SS
Checked:	AT
Approved:	HRY

Scale :- H=:-1:2500
V=:-1:2500
Sheet size: A2

Project: Consultancy Service for Preparation for DPR for short length transitory 3 lane bi-directional vehicular underpass connecting Hebbal flyover junction to Veterinary college via GKVK premises.

Drawing Title: PLAN & PROFILE (HEBBAL TO BAPTIST HOSPITAL ENTRY)
(Km.0+000 to Km.1+000)

Drawing No.: RC/1640/HO/HBT/TU/DWG/P&P/01A/R0


HEBBAL
MEKHRI CIRCLE
N
Proposed Center Line
(Hebbal to Baptist Hospital Entry)
Metro Line (Phase-3A)
HIP DATA
CH : 1+017 km
X = 780476.249
Y = 1442904.611
R = 286.25 m
Lc = 76.82 m
Δ = 23.383°
Ls = 40.00 m
DS (v)60km/hr)
HIP DATA
CH : 1+066 km
X = 780463.350
Y = 1442909.851
R = 300.00 m
Lc = 81.07 m
Δ = 23.122°
Ls = 40.00 m
DS (v) 60km/hr)
HIP DATA
CH : 1+495 km
X = 780367.764
Y = 1442437.430
R = 186.25 m
Lc = 195.43 m
Δ = 78.577°
Ls = 60.00 m
DS (v)60km/hr)
HIP DATA
CH : 1+557 km
X = 780351.985
Y = 1442429.510
R = 200.00 m
Lc = 214.22 m
Δ = 78.558°
Ls = 60.00 m
DS (v) 60km/hr)
HIP DATA
CH : 1+870 km
X = 780755.485
Y = 1442260.772
R = 168.75 m
Lc = 185.50 m
Δ = 90.144°
Ls = 80.00 m
DS (v)60km/hr)
HIP DATA
CH : 1+926 km
X = 780737.328
Y = 1442253.935
R = 155.00 m
Lc = 163.90 m
Δ = 90.159°
Ls = 80.00 m
DS (v) 60km/hr)
CH:1+000
CH:1+100
CH:1+200
CH:1+300
CH:1+400
CH:1+500
CH:1+600
CH:1+700
CH:1+800
CH:1+900
CH:2+000
CH:2+100
CH:2+200
CH:1+100
CH:1+200
CH:1+300
CH:1+400
CH:1+500
CH:1+600
CH:1+700
CH:1+800
CH:1+900
CH:2+000
CH:2+100
CH:2+200
CH: 34+477.453
Asphalt Road
Mud Road
Cultivation Land
Agriculture University Campus
Nyaya Grama
Compound Wall
Sheet
RCC
POULTRY FARM
Cricket Ground
Veterinary Biologicals
Institute of Animal Health
Bangalore Baptist Hospital
Anand Nagar Main Road
Metro Line (Phase-3A)

Legend

Plan	
Proposed Open Cut (Entry Ramp)	▥
Proposed Cut & Cover (Entry Ramp)	▦
Proposed Open Cut (Exit Ramp)	▥
Proposed Cut & Cover (Exit Ramp)	▩
Proposed Diversion	■

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NEW DELHI - 110001 (INDIA)

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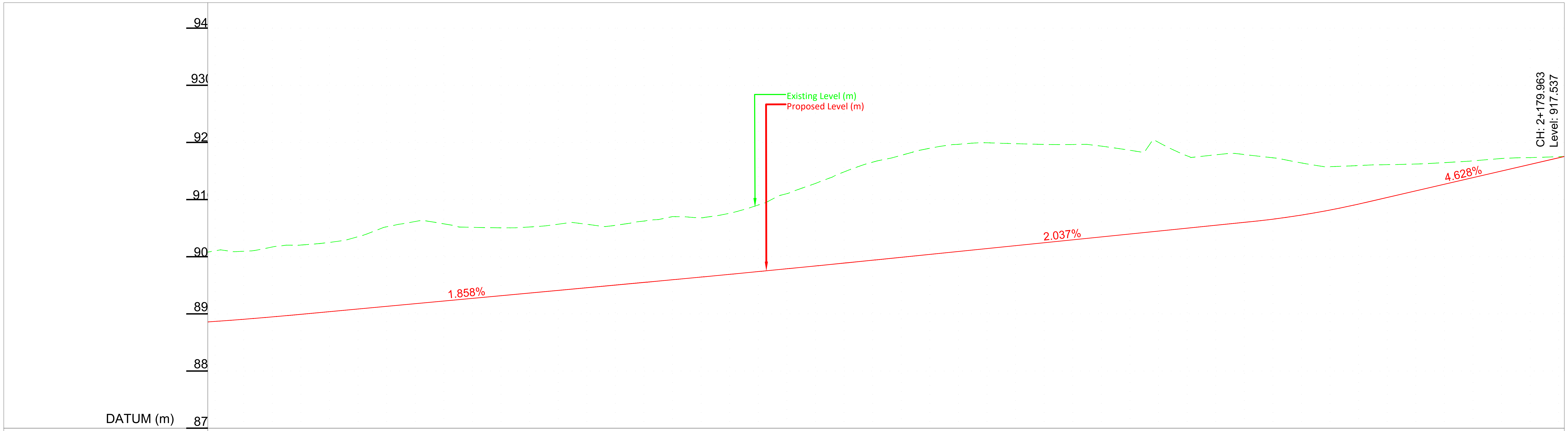
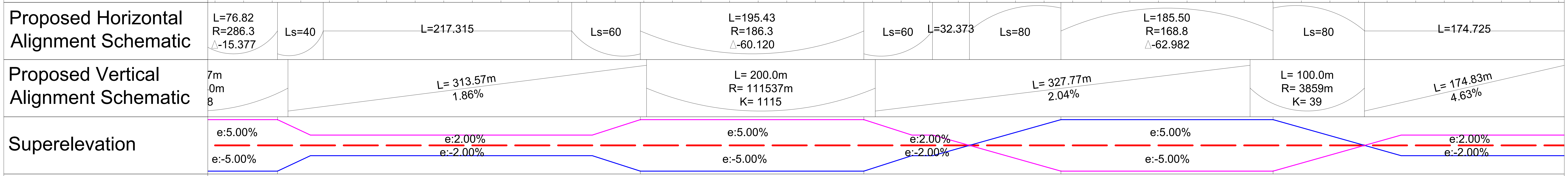
(Km.1+000 to Km.2+180)

Drawing No.: RC/1640/HO/HBT/TU/DWG/P&P/02/R0

HEBBAL ← → MEKHRI CIRCLE



Chainage	Proposed Levels (m)	Existing Levels (m)	Level Difference (m)
1+000	888.680	901.029	-12.349
1+025	889.052	900.953	-11.901
1+050	889.469	901.699	-12.230
1+075	889.926	902.043	-12.117
1+100	890.390	902.497	-12.106
1+125	890.855	903.499	-12.644
1+150	891.319	905.235	-13.916
1+175	891.784	906.158	-14.375
1+200	892.248	905.759	-13.511
1+225	892.712	905.141	-12.429
1+250	893.177	905.052	-11.876
1+275	893.641	905.203	-11.562
1+300	894.106	905.688	-11.582
1+325	894.570	905.690	-11.120
1+350	895.034	905.491	-10.456
1+375	895.499	906.236	-10.738
1+400	895.965	907.013	-11.048
1+425	896.438	906.827	-10.389
1+450	896.915	907.610	-10.694
1+475	897.399	909.045	-11.646
1+500	897.888	911.030	-13.142
1+525	898.383	912.825	-14.442
1+550	898.883	914.836	-15.953
1+575	899.389	916.541	-17.152
1+600	899.898	917.739	-17.841
1+625	900.407	918.979	-18.572
1+650	900.916	919.666	-18.749
1+675	901.426	919.938	-18.512
1+700	901.935	919.781	-17.846
1+725	902.444	919.651	-17.207
1+750	902.953	919.637	-16.683
1+775	903.462	919.355	-15.892
1+800	903.972	918.630	-14.658
1+825	904.481	920.019	-15.538
1+850	904.990	917.654	-12.664
1+875	905.499	917.830	-12.331
1+900	906.009	917.883	-11.875
1+925	906.569	917.316	-10.747
1+950	907.288	916.413	-9.125
1+975	908.169	915.758	-7.590
2+000	909.211	915.953	-6.742
2+025	910.365	916.107	-5.743
2+050	911.522	916.220	-4.699
2+075	912.679	916.463	-3.784
2+100	913.836	916.775	-2.939
2+125	914.993	917.186	-2.194
2+150	916.150	917.341	-1.191
2+175	917.307	917.504	-0.197
2+180	917.537	917.537	0.000


Proposed Horizontal Alignment Schematic
L=76.82
R=286.3
△-15.377
Ls=40
L=217.315
Ls=60
L=195.43
R=186.3
△-60.120
Ls=60
L=32.373
Ls=80
L=185.50
R=168.8
△-62.982
Ls=80
L=174.725
Proposed Vertical Alignment Schematic
7m
.0m
8
L= 313.57m
1.86%
L= 200.0m
R= 111537m
K= 1115
L= 327.77m
2.04%
L= 100.0m
R= 3859m
K= 39
L= 174.83m
4.63%
Superelevation
e:5.00%
e:-5.00%
e:2.00%
e:-2.00%
e:5.00%
e:-5.00%
e:2.00%
e:-2.00%
e:5.00%
e:-5.00%
e:2.00%
e:-2.00%

Legend

L Profile

Proposed Road Levels 🟥	K - Ratio Between vertical curve Length & Change of Gradient {Lc/(G2-G1)}
Existing Levels 🟩	e - Superelevation (%)
Lv - Length of Vertical Curve	D - Straight Length of Horizontal Alignment
L - Length of Grade(m)	Lc - Length of Circular Curve

REVISION	DATE	AMENDMENT \ ISSUE DESCRIPTION
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CULTURAL CENTRE BUILDING
NEW DELHI - 110001 (INDIA)

REVISED FINAL DETAILED PROJECT REPORT

Designed:	RR
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Checked:	AT
Approved:	HRY

Scale :- H=:-1:2500
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Sheet size: A2

Project: Consultancy Service for Preparation for DPR for short length transitory 3 lane bi-directional vehicular underpass connecting Hebbal flyover junction to Veterinary college via GKVK premises.

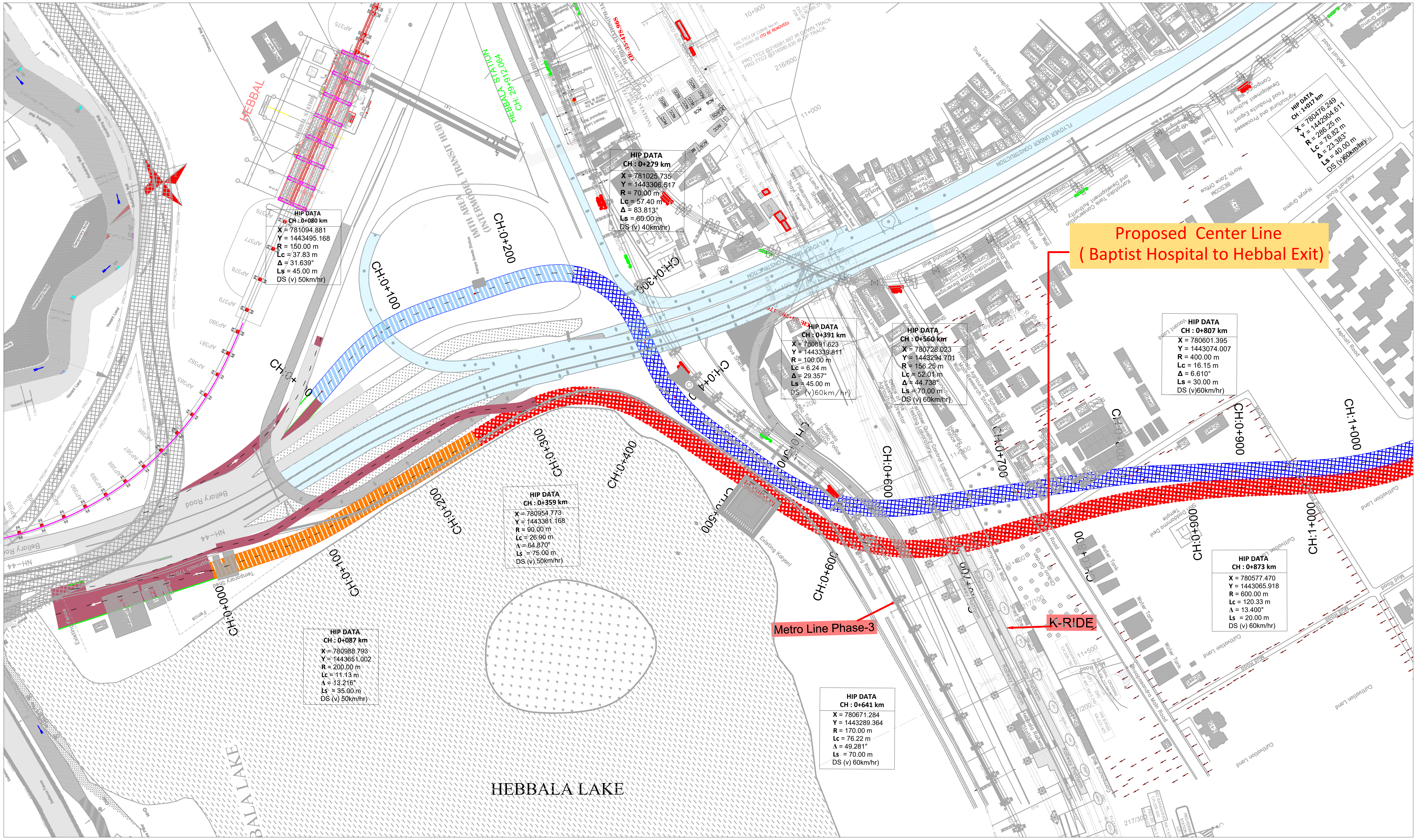
Drawing Title: PLAN & PROFILE (HEBBAL TO BAPTIST HOSPITAL ENTRY)
(Km.1+000 to Km.2+180)

Drawing No. RC/1640/HO/HBT/TU/DWG/P&P/02A/R0

PLAN & PROFILE -OPTION
(BAPTIST HOSPITAL TO HEBBAL EXIT)

HEBBAL ←

→ MEKHRI CIRCLE


Proposed Center Line
(Baptist Hospital to Hebbal Exit)
Metro Line Phase-3
K-RIDE
HEBBALA LAKE
HEBBAL
HEBBAL STATION
IMTH AREA (INTERMODEL TRANSIT HUB)
Kempe Gowda Statue
Bellary Road
NH-44
CH:0+000
CH:0+100
CH:0+200
CH:0+300
CH:0+400
CH:0+500
CH:0+600
CH:0+700
CH:0+800
CH:0+900
CH:1+000
HIP DATA
CH : 0+080 km
X = 781094.881
Y = 1443495.168
R = 150.00 m
Lc = 37.83 m
Δ = 31.639°
Ls = 45.00 m
DS (v) 50km/hr)
HIP DATA
CH : 0+279 km
X = 781025.735
Y = 1443306.517
R = 70.00 m
Lc = 57.40 m
Δ = 83.813°
Ls = 60.00 m
DS (v) 40km/hr)
HIP DATA
CH : 0+391 km
X = 780891.623
Y = 1443339.811
R = 100.00 m
Lc = 6.24 m
Δ = 29.357°
Ls = 45.00 m
DS (v)60km/hr)
HIP DATA
CH : 0+560 km
X = 780728.023
Y = 1443294.701
R = 156.25 m
Lc = 52.01 m
Δ = 44.738°
Ls = 70.00 m
DS (v) 60km/hr)
HIP DATA
CH : 0+807 km
X = 780601.395
Y = 1443074.007
R = 400.00 m
Lc = 16.15 m
Δ = 6.610°
Ls = 30.00 m
DS (v)60km/hr)
HIP DATA
CH : 1+017 km
X = 780476.249
Y = 1442904.611
R = 286.25 m
Lc = 76.82 m
Δ = 23.383°
Ls = 40.00 m
DS (v)60km/hr)
HIP DATA
CH : 0+359 km
X = 780954.773
Y = 1443381.168
R = 90.00 m
Lc = 26.90 m
Δ = 64.870°
Ls = 75.00 m
DS (v) 50km/hr)
HIP DATA
CH : 0+087 km
X = 780988.793
Y = 1443651.002
R = 200.00 m
Lc = 11.13 m
Δ = 13.216°
Ls = 35.00 m
DS (v) 50km/hr)
HIP DATA
CH : 0+641 km
X = 780671.284
Y = 1443289.364
R = 170.00 m
Lc = 76.22 m
Δ = 49.281°
Ls = 70.00 m
DS (v) 60km/hr)
HIP DATA
CH : 0+873 km
X = 780577.470
Y = 1443065.918
R = 600.00 m
Lc = 120.33 m
Δ = 13.400°
Ls = 20.00 m
DS (v) 60km/hr)
Railway Platform
Hebbala Railway Station
Bhoopasandra Main Road
Water Tank
Cultivation Land
Asphalt Road
Nyaya Grama

Legend

Plan

Item	Symbol
Proposed Open Cut (Entry Ramp)	▥
Proposed Cut & Cover (Entry Ramp)	▦
Proposed Open Cut (Exit Ramp)	▥
Proposed Cut & Cover (Exit Ramp)	▦
Proposed Diversion	▬

REVISION	DATE	AMENDMENT \ ISSUE DESCRIPTION
R0	Sep:- 2025	-

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Bengaluru Smart Infrastructure Limited

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CULTURAL CENTRE BUILDING
NEW DELHI - 110001 (INDIA)

REVISED FINAL DETAILED PROJECT REPORT

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Sheet size: A2

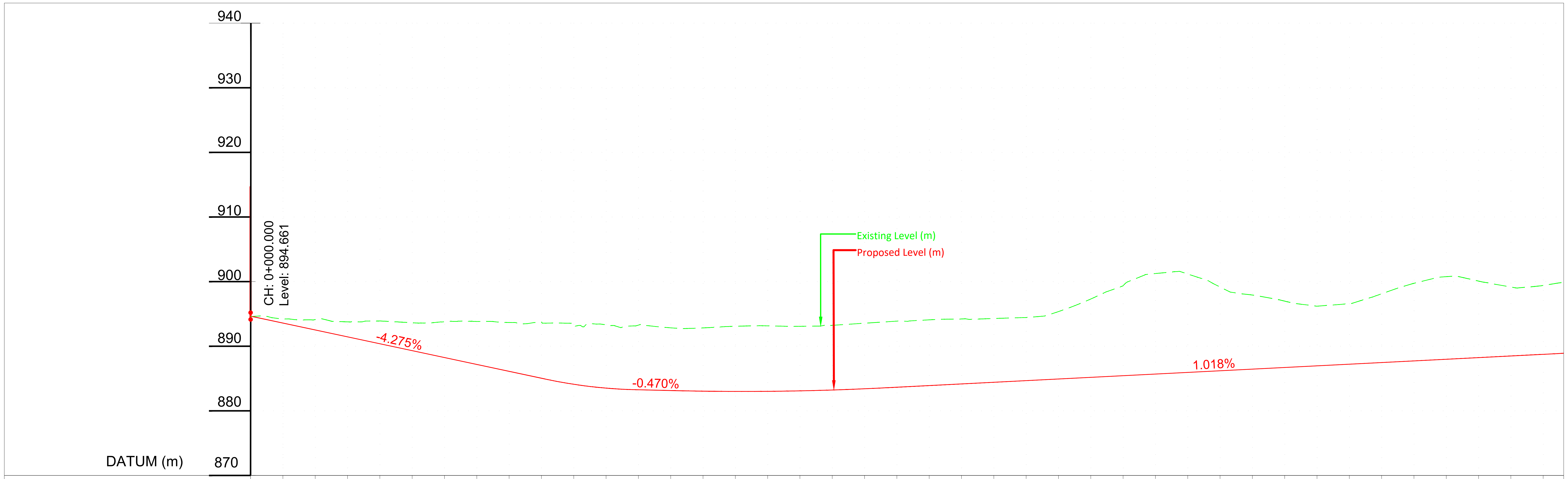
Project: Consultancy Service for Preparation for DPR for short length transitory 3 lane bi-directional vehicular underpass connecting Hebbal flyover junction to Veterinary college via GKVK premises.

Drawing Title: PLAN & PROFILE (BAPTIST HOSPITAL TO HEBBAL EXIT)
(Km.0+000 to Km.1+000)

Drawing No.: RC/1640/HO/HBT/TU/DWG/P&P/03/R0

← HEBBAL

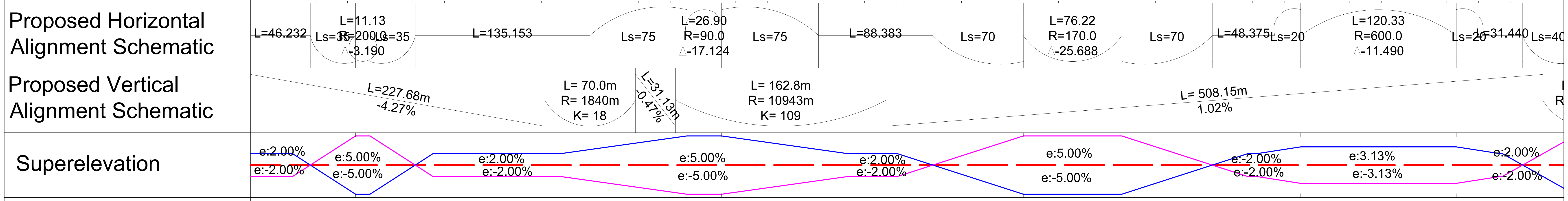
MEKHRI CIRCLE →



Chainage	0+000	0+025	0+050	0+075	0+100	0+125	0+150	0+175	0+200	0+225	0+250	0+275	0+300	0+325
Proposed Levels (m)	894.661	893.592	892.523	891.455	890.386	889.317	888.249	887.180	886.111	885.042	884.109	883.514	883.256	883.139
Existing Levels (m)	894.579	894.239	894.116	893.768	893.903	893.630	893.777	893.829	893.667	893.722	893.537	893.311	893.264	892.844
Level Difference (m)	0.082	-0.647	-1.593	-2.313	-3.517	-4.313	-5.529	-6.649	-7.556	-8.680	-9.428	-9.798	-10.008	-9.706

Chainage	0+350	0+375	0+400	0+425	0+450	0+475	0+500	0+525	0+550	0+575	0+600	0+625	0+650	0+675
Proposed Levels (m)	883.042	883.001	883.018	883.092	883.223	883.411	883.653	883.907	884.161	884.416	884.670	884.925	885.179	885.434
Existing Levels (m)	892.834	893.087	893.153	893.086	893.234	893.559	893.883	894.080	894.219	894.289	894.441	895.360	897.311	899.367
Level Difference (m)	-9.792	-10.085	-10.135	-9.994	-10.012	-10.148	-10.231	-10.173	-10.058	-9.873	-9.771	-10.435	-12.132	-13.934

Chainage	0+700	0+725	0+750	0+775	0+800	0+825	0+850	0+875	0+900	0+925	0+950	0+975	1+000
Proposed Levels (m)	885.688	885.943	886.197	886.452	886.706	886.960	887.215	887.469	887.724	887.978	888.233	888.487	888.742
Existing Levels (m)	901.249	901.176	899.165	897.923	896.979	896.198	896.588	898.116	899.737	900.765	900.081	899.162	899.404
Level Difference (m)	-15.561	-15.234	-12.968	-11.471	-10.273	-9.238	-9.373	-10.647	-12.014	-12.787	-11.848	-10.675	-10.662


Proposed Horizontal Alignment Schematic
L=46.232
L=11.13
Ls=35
R=200.0
Ls=35
△-3.190
L=135.153
Ls=75
L=26.90
R=90.0
△-17.124
Ls=75
L=88.383
Ls=70
L=76.22
R=170.0
△-25.688
Ls=70
L=48.375
Ls=20
L=120.33
R=600.0
△-11.490
Ls=20
L=31.440
Ls=40
Proposed Vertical Alignment Schematic
L=227.68m
-4.27%
L= 70.0m
R= 1840m
K= 18
L=31.13m
-0.47%
L= 162.8m
R= 10943m
K= 109
L= 508.15m
1.02%
Superelevation
e:2.00%
e:-2.00%
e:5.00%
e:-5.00%
e:2.00%
e:-2.00%
e:5.00%
e:-5.00%
e:2.00%
e:-2.00%
e:5.00%
e:-5.00%
e:-2.00%
e:-2.00%
e:3.13%
e:-3.13%
e:2.00%
e:-2.00%

Legend

L Profile

Proposed Road Levels 🟥	K - Ratio Between vertical curve Length & Change of Gradient {Lc/(G2-G1)}
Existing Levels 🟩	e - Superelevation (%)
Lv - Length of Vertical Curve	D - Straight Length of Horizontal Alignment
L - Length of Grade(m)	Lc - Length of Circular Curve

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Sheet size: A2

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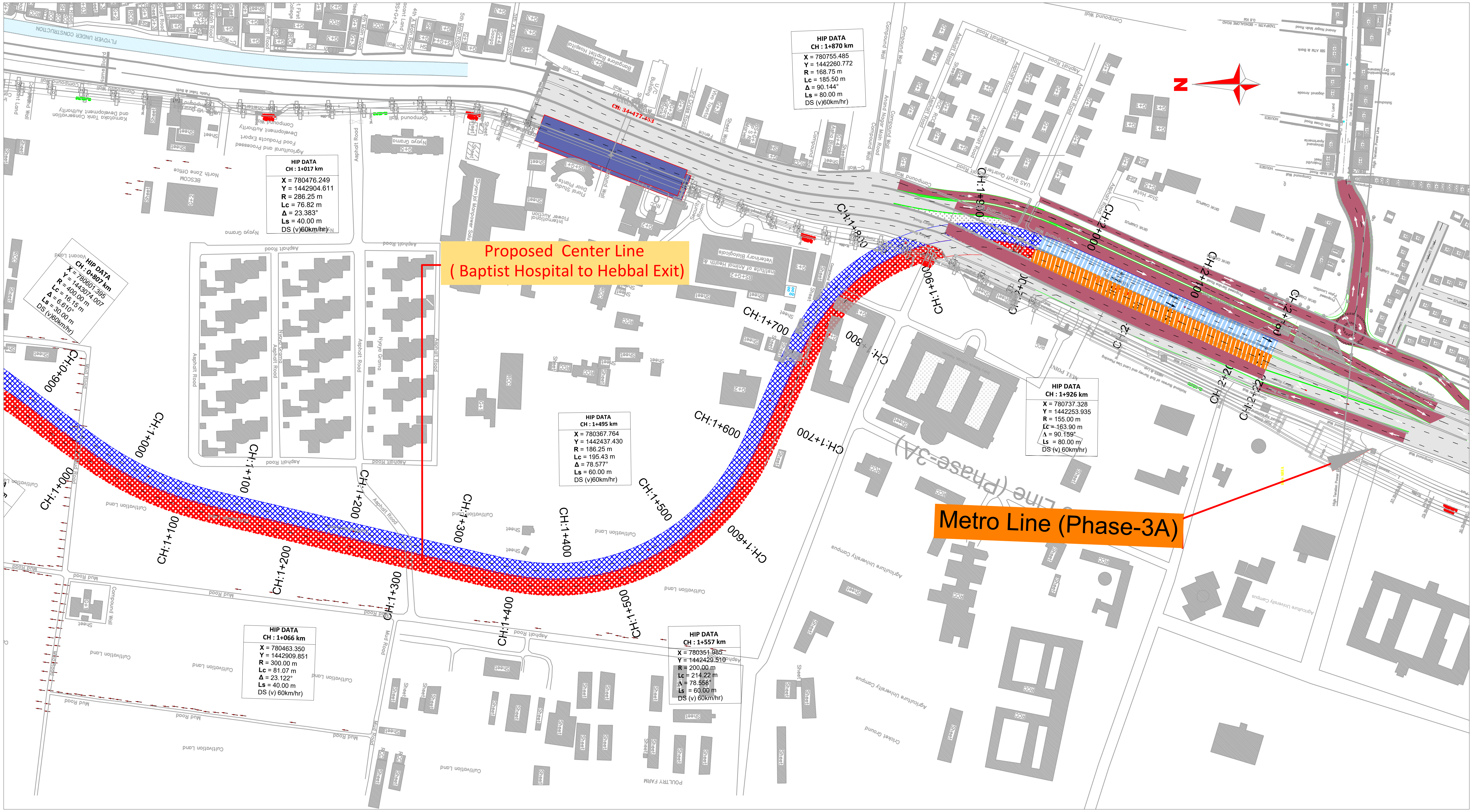
Drawing No.	RC/1640/HO/HBT/TU/DWG/P&P/03A/R0

HEBBAL ← → MEKHRI CIRCLE


Proposed Center Line
(Baptist Hospital to Hebbal Exit)
Metro Line (Phase-3A)
N
HIP DATA
CH : 0+807 km
X = 780601.395
Y = 1443007.007
R = 400.00 m
Lc = 6.15 m
Δ = 6.610°
Ls = 30.00 m
DS (v)60km/hr)
HIP DATA
CH : 1+017 km
X = 780476.249
Y = 1442904.611
R = 286.25 m
Lc = 76.82 m
Δ = 23.383°
Ls = 40.00 m
DS (v)60km/hr)
HIP DATA
CH : 1+066 km
X = 780463.350
Y = 1442909.851
R = 300.00 m
Lc = 81.07 m
Δ = 23.122°
Ls = 40.00 m
DS (v) 60km/hr)
HIP DATA
CH : 1+495 km
X = 780367.764
Y = 1442437.430
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Lc = 195.43 m
Δ = 78.577°
Ls = 60.00 m
DS (v)60km/hr)
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CH : 1+557 km
X = 780351.985
Y = 1442429.510
R = 200.00 m
Lc = 214.22 m
Δ = 78.558°
Ls = 60.00 m
DS (v) 60km/hr)
HIP DATA
CH : 1+870 km
X = 780755.485
Y = 1442260.772
R = 168.75 m
Lc = 185.50 m
Δ = 90.144°
Ls = 80.00 m
DS (v)60km/hr)
HIP DATA
CH : 1+926 km
X = 780737.328
Y = 1442253.935
R = 155.00 m
Lc = 163.90 m
Δ = 90.159°
Ls = 80.00 m
DS (v) 60km/hr)
CH:0+900
CH:1+000
CH:1+100
CH:1+200
CH:1+300
CH:1+400
CH:1+500
CH:1+600
CH:1+700
CH:1+800
CH:1+900
CH:2+000
CH:2+100
CH:2+200
CH: 34+477.453
Asphalt Road
Mud Road
Cultivation Land
Sheet
Agriculture University Campus
Veterinary Biologicals
Bengaluru Baptist Hospital
Cricket Ground
POULTRY FARM
FLYOVER UNDER CONSTRUCTION

Legend

Plan	
Proposed Open Cut (Entry Ramp)	▥
Proposed Cut & Cover (Entry Ramp)	▦
Proposed Open Cut (Exit Ramp)	▥
Proposed Cut & Cover (Exit Ramp)	▦
Proposed Diversion	▬

REVISION	DATE	AMENDMENT \ ISSUE DESCRIPTION
R0	Sep:- 2025	-

CLIENT

GOVERNMENT OF KARNATAKA

Bengaluru Smart Infrastructure Limited

AE/B-SMILE
AEE/B-SMILE
EE/B-SMILE
EIC-B-SMILE

CONSULTANT:

RODIC CONSULTANTS PVT. LTD.
1, JAI SINGH MARG (FIRST FLOOR), YMCA
CULTURAL CENTRE BUILDING
NEW DELHI - 110001 (INDIA)

REVISED FINAL DETAILED PROJECT REPORT

Designed:	RR
Drawn:	SS
Checked:	AT
Approved:	HRY

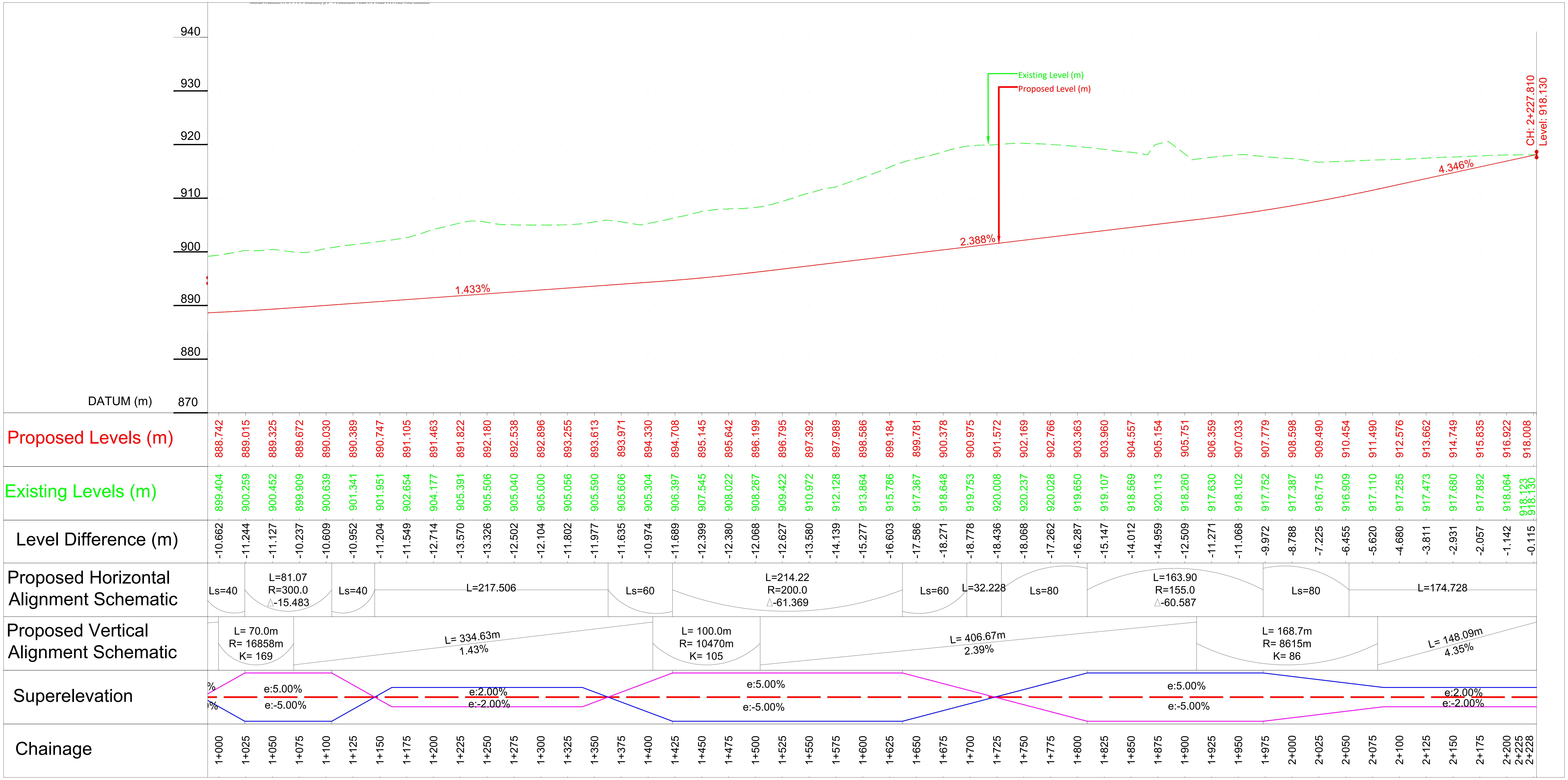
Scale :- H=:-1:2500
V=:-1:2500
Sheet size: A2

Project: Consultancy Service for Preparation for DPR for short length transitory 3 lane bi-directional vehicular underpass connecting Hebbal flyover junction to Veterinary college via GKVK premises.

Drawing Title: PLAN & PROFILE (BAPTIST HOSPITAL TO HEBBAL EXIT)
(Km.1+000 to Km.2+228)

Drawing No. RC/1640/HO/HBT/TU/DWG/P&P/04/R0

HEBBAL ← → MEKHRI CIRCLE



Chainage	Proposed Levels (m)	Existing Levels (m)	Level Difference (m)
1+000	888.742	899.404	-10.662
1+025	889.015	900.259	-11.244
1+050	889.325	900.452	-11.127
1+075	889.672	899.909	-10.237
1+100	890.030	900.639	-10.609
1+125	890.389	901.341	-10.952
1+150	890.747	901.951	-11.204
1+175	891.105	902.654	-11.549
1+200	891.463	904.177	-12.714
1+225	891.822	905.391	-13.570
1+250	892.180	905.506	-13.326
1+275	892.538	905.040	-12.502
1+300	892.896	905.000	-12.104
1+325	893.255	905.056	-11.802
1+350	893.613	905.590	-11.977
1+375	893.971	905.606	-11.635
1+400	894.330	905.304	-10.974
1+425	894.708	906.397	-11.689
1+450	895.145	907.545	-12.399
1+475	895.642	908.022	-12.380
1+500	896.199	908.267	-12.068
1+525	896.795	909.422	-12.627
1+550	897.392	910.972	-13.580
1+575	897.989	912.128	-14.139
1+600	898.586	913.864	-15.277
1+625	899.184	915.786	-16.603
1+650	899.781	917.367	-17.586
1+675	900.378	918.648	-18.271
1+700	900.975	919.753	-18.778
1+725	901.572	920.008	-18.436
1+750	902.169	920.237	-18.068
1+775	902.766	920.028	-17.262
1+800	903.363	919.650	-16.287
1+825	903.960	919.107	-15.147
1+850	904.557	918.569	-14.012
1+875	905.154	920.113	-14.959
1+900	905.751	918.260	-12.509
1+925	906.359	917.630	-11.271
1+950	907.033	918.102	-11.068
1+975	907.779	917.752	-9.972
2+000	908.598	917.387	-8.788
2+025	909.490	916.715	-7.225
2+050	910.454	916.909	-6.455
2+075	911.490	917.110	-5.620
2+100	912.576	917.255	-4.680
2+125	913.662	917.473	-3.811
2+150	914.749	917.680	-2.931
2+175	915.835	917.892	-2.057
2+200	916.922	918.064	-1.142
2+225	918.008	918.123	-0.115
2+228		918.130	

Legend

L Profile

Proposed Road Levels 🟥	K - Ratio Between vertical curve Length & Change of Gradient {Lc/(G2-G1)}
Existing Levels 🟩	e - Superelevation (%)
Lv - Length of Vertical Curve	D - Straight Length of Horizontal Alignment
L - Length of Grade(m)	Lc - Length of Circular Curve

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Bengaluru Smart Infrastructure Limited

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CONSULTANT:
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1, JAI SINGH MARG (FIRST FLOOR), YMCA
CULTURAL CENTRE BUILDING
NEW DELHI - 110001 (INDIA)

REVISED FINAL DETAILED PROJECT REPORT

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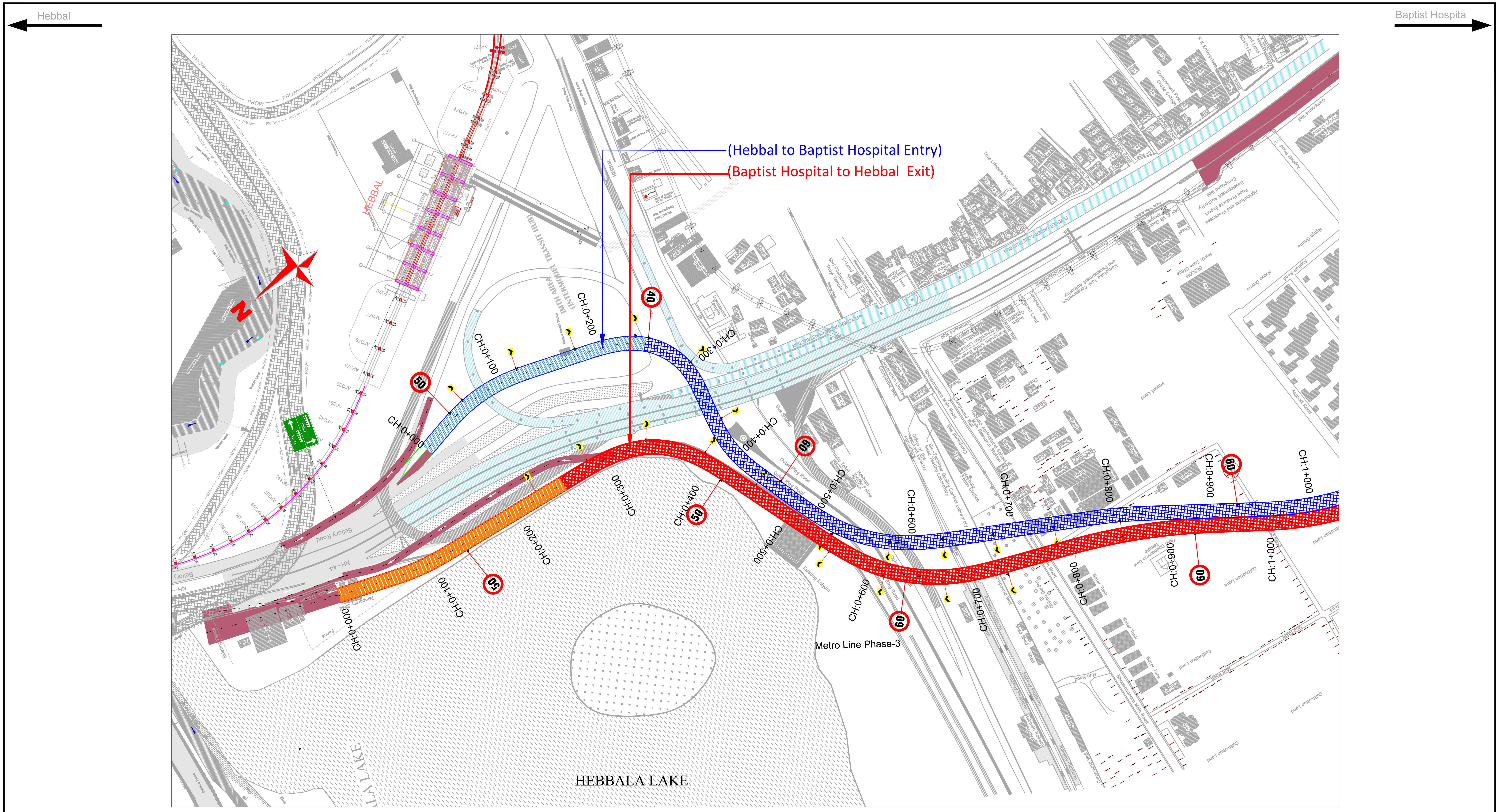
V=:-1:2500
Sheet size: A2

Project	Consultancy Service for Preparation for DPR for short length transitory 3 lane bi-directional vehicular underpass connecting Hebbal flyover junction to Veterinary college via GKVK premises.
Drawing Title	PLAN & PROFILE (BAPTIST HOSPITAL TO HEBBAL EXIT) (Km.2+000 to Km.2+228)
Drawing No.	RC/1640/HO/HBT/TU/DWG/P&P/04A/R0

TRAFFIC DIVERSION PLAN
(HEBBAL TO BAPTIST HOSPITAL ENTRY & EXIT)


Hebbal
Baptist Hospita
(Hebbal to Baptist Hospital Entry)
(Baptist Hospital to Hebbal Exit)
N
HEBBAL
CH:0+000
CH:0+100
CH:0+200
CH:0+300
CH:0+400
CH:0+500
CH:0+600
CH:0+700
CH:0+800
CH:0+900
CH:1+000
40
50
60
Bellary Road
NH-44
Metro Line Phase-3
HEBBALA LAKE
FLYOVER UNDER CONSTRUCTION

Legend

Plan

Proposed Open Cut (Entry Ramp)	▨
Proposed Cut & Cover (Entry Ramp)	▨
Proposed Open Cut (Exit Ramp)	▨
Proposed Cut & Cover (Exit Ramp)	▨
Proposed Diversion	🟥

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REVISED FINAL DETAILED PROJECT REPORT

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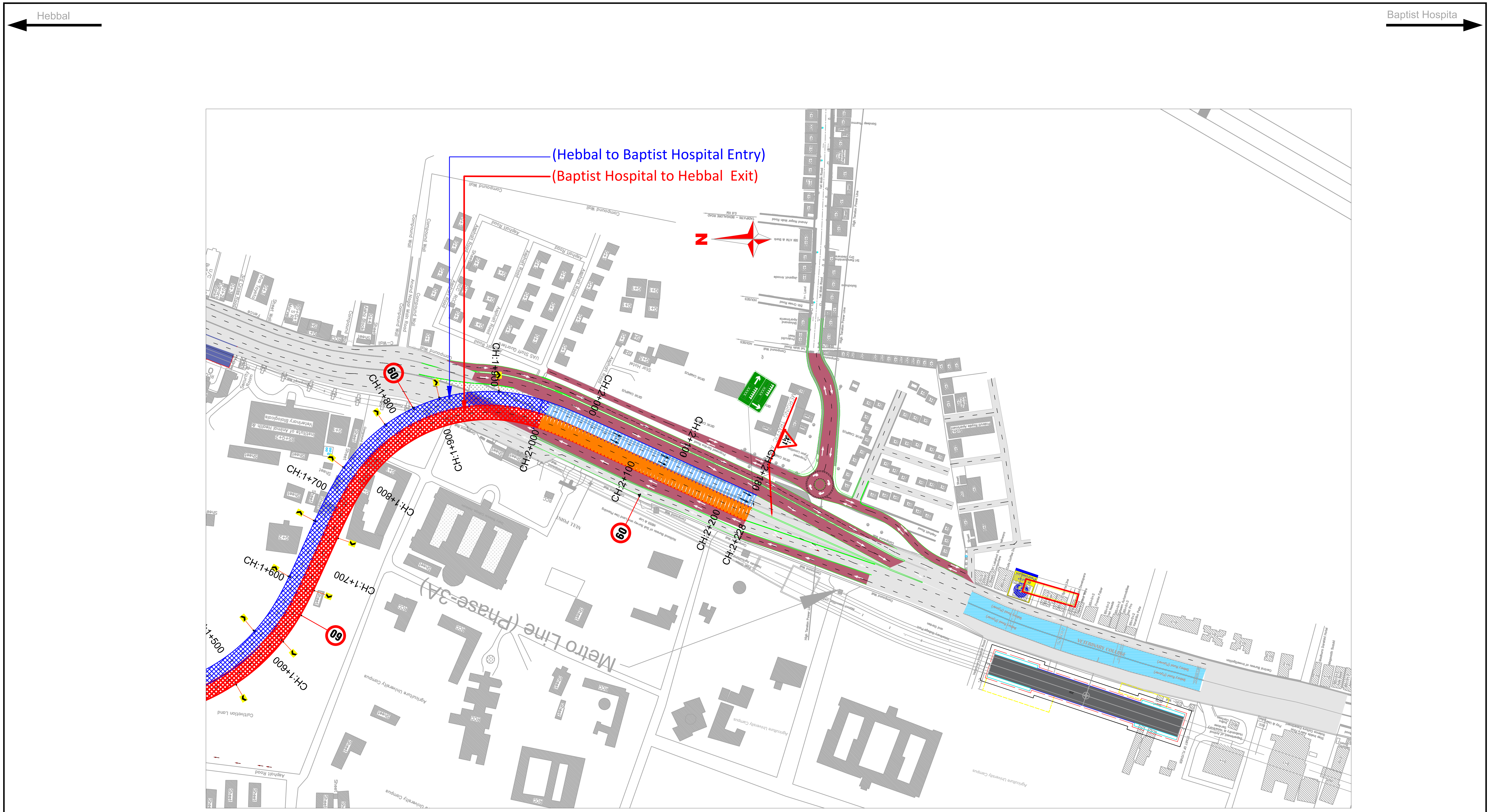
Approved:	HRY		Sheet size: A2

Project	**Consultancy Service for Preparation for DPR for short length transitory 3 lane bi-directional vehicular underpass connecting Hebbal flyover junction to Veterinary college via GKVK premises.**
Drawing Title	TRAFFIC DIVERSION PLAN (HEBBAL TO BAPTIST HOSPITAL)
Drawing No.	RC/1640/HO/HBT/TU/DWG/TDP/01/R0


Hebbal
Baptist Hospita
(Hebbal to Baptist Hospital Entry)
(Baptist Hospital to Hebbal Exit)
N
60
CH:1+800
CH:1+900
CH:1+700
CH:1+600
CH:1+500
CH:2+000
CH:2+100
CH:2+200
CH:2+228
CH:2+180
Metro Line (Phase-3A)

Legend

Plan

Proposed Open Cut (Entry Ramp)	▥
Proposed Cut & Cover (Entry Ramp)	▦
Proposed Open Cut (Exit Ramp)	▥
Proposed Cut & Cover (Exit Ramp)	▦
Proposed Diversion	▬

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Scale :- NTS

Sheet size: A2

Project: **Consultancy Service for Preparation for DPR for short length transitory 3 lane bi-directional vehicular underpass connecting Hebbal flyover junction to Veterinary college via GKVK premises.**

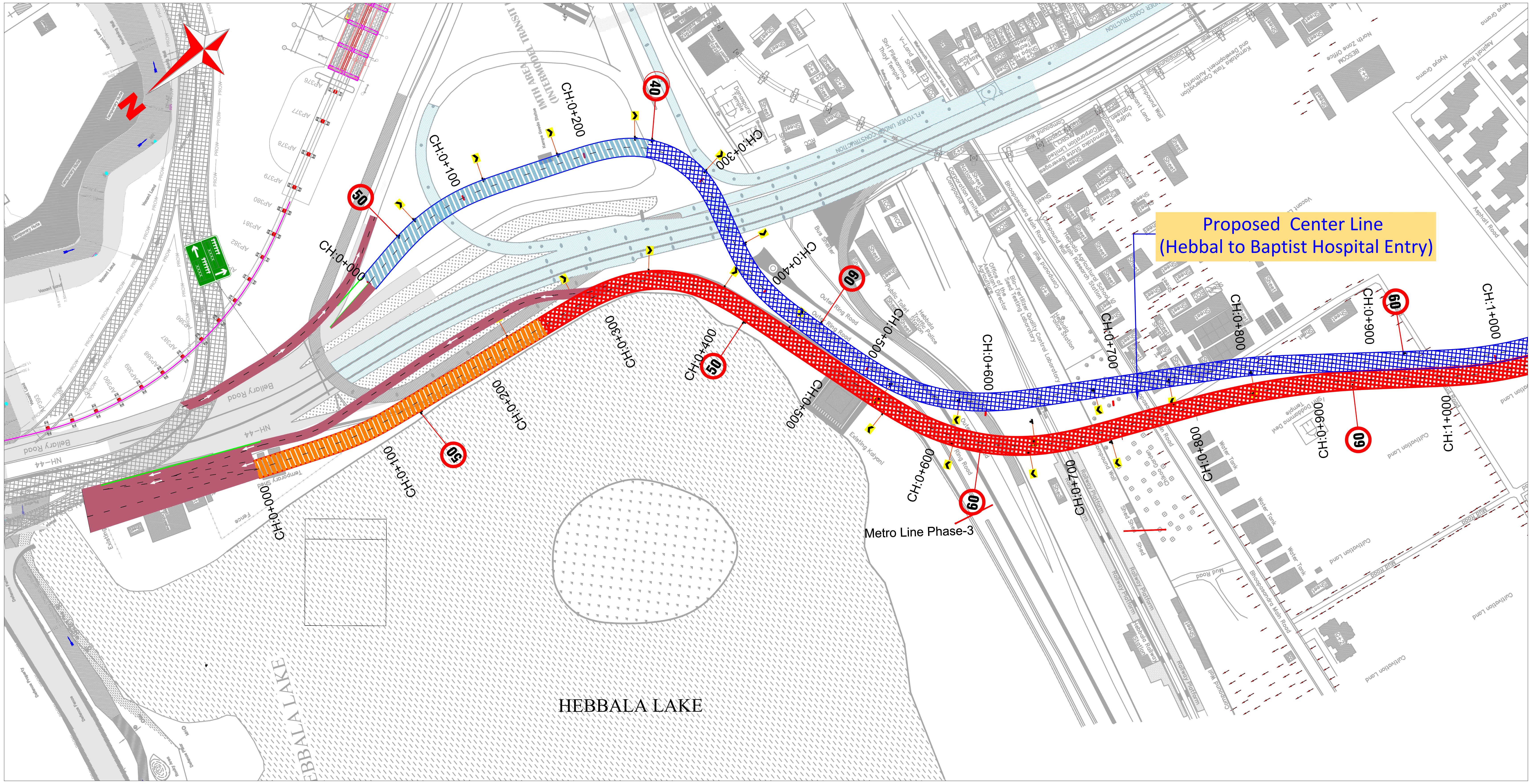
Drawing Title: TRAFFIC DIVERSION PLAN
(HEBBAL TO BAPTIST HOSPITAL)

Drawing No.: RC/1640/HO/HBT/TU/DWG/TDP/02/R0

TRAFFIC PLAN
(HEBBAL TO BAPTIST HOSPITAL ENTRY)

← Hebbal

Baptist Hospita →


Proposed Center Line
(Hebbal to Baptist Hospital Entry)
N
CH:0+000
CH:0+100
CH:0+200
CH:0+300
CH:0+400
CH:0+500
CH:0+600
CH:0+700
CH:0+800
CH:0+900
CH:1+000
40
50
60
Metro Line Phase-3
HEBBALA LAKE
Bellary Road
NH-44

Legend

Plan

Plan	
Proposed Open Cut (Entry Ramp)	▥
Proposed Cut & Cover (Entry Ramp)	▦
Proposed Open Cut (Exit Ramp)	▥
Proposed Cut & Cover (Exit Ramp)	▦
Proposed Diversion	▬

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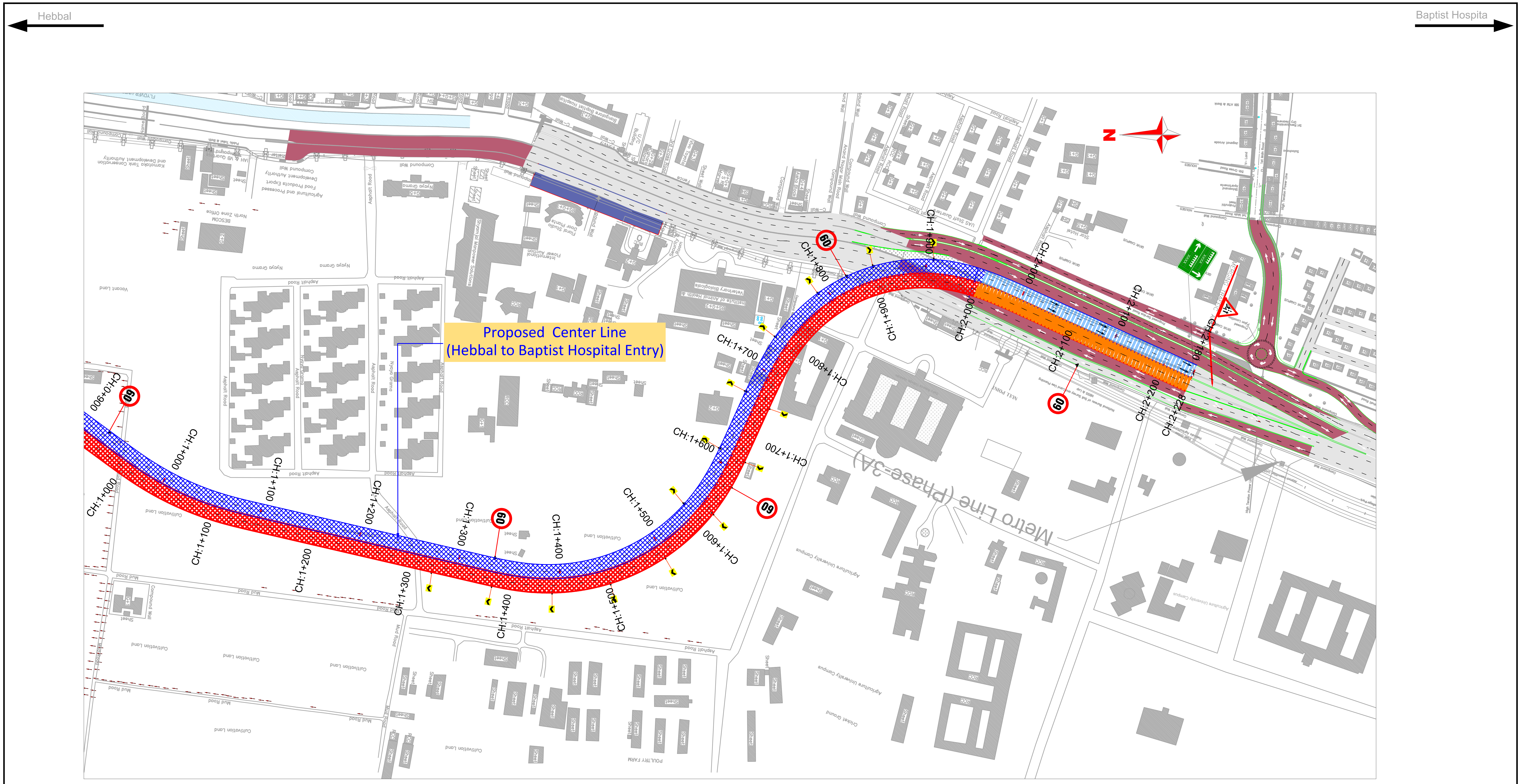
Sheet size: A2

Project: **Consultancy Service for Preparation for DPR for short length transitory 3 lane bi-directional vehicular underpass connecting Hebbal flyover junction to Veterinary college via GKVK premises.**

Drawing Title: TRAFFIC PLAN
(HEBBAL TO BAPTIST HOSPITAL ENTRY)

Drawing No. RC/1640/HO/HBT/TU/DWG/TP/ 01/R0


Hebbal
Baptist Hospita
N
Proposed Center Line
(Hebbal to Baptist Hospital Entry)
Metro Line (Phase-3A)
CH:0+900
CH:1+000
CH:1+100
CH:1+200
CH:1+300
CH:1+400
CH:1+500
CH:1+600
CH:1+700
CH:1+800
CH:1+900
CH:2+000
CH:2+100
CH:2+200
CH:2+180
CH:2+228
60
Agriculture University Campus
Cultivation Land
Asphalt Road
Mud Road
Compound Wall
Sheet
Nyaya Grama
POULTRY FARM
Cricket Ground

Legend

Plan	
Proposed Open Cut (Entry Ramp)	▥
Proposed Cut & Cover (Entry Ramp)	▦
Proposed Open Cut (Exit Ramp)	▥
Proposed Cut & Cover (Exit Ramp)	▦
Proposed Diversion	▬

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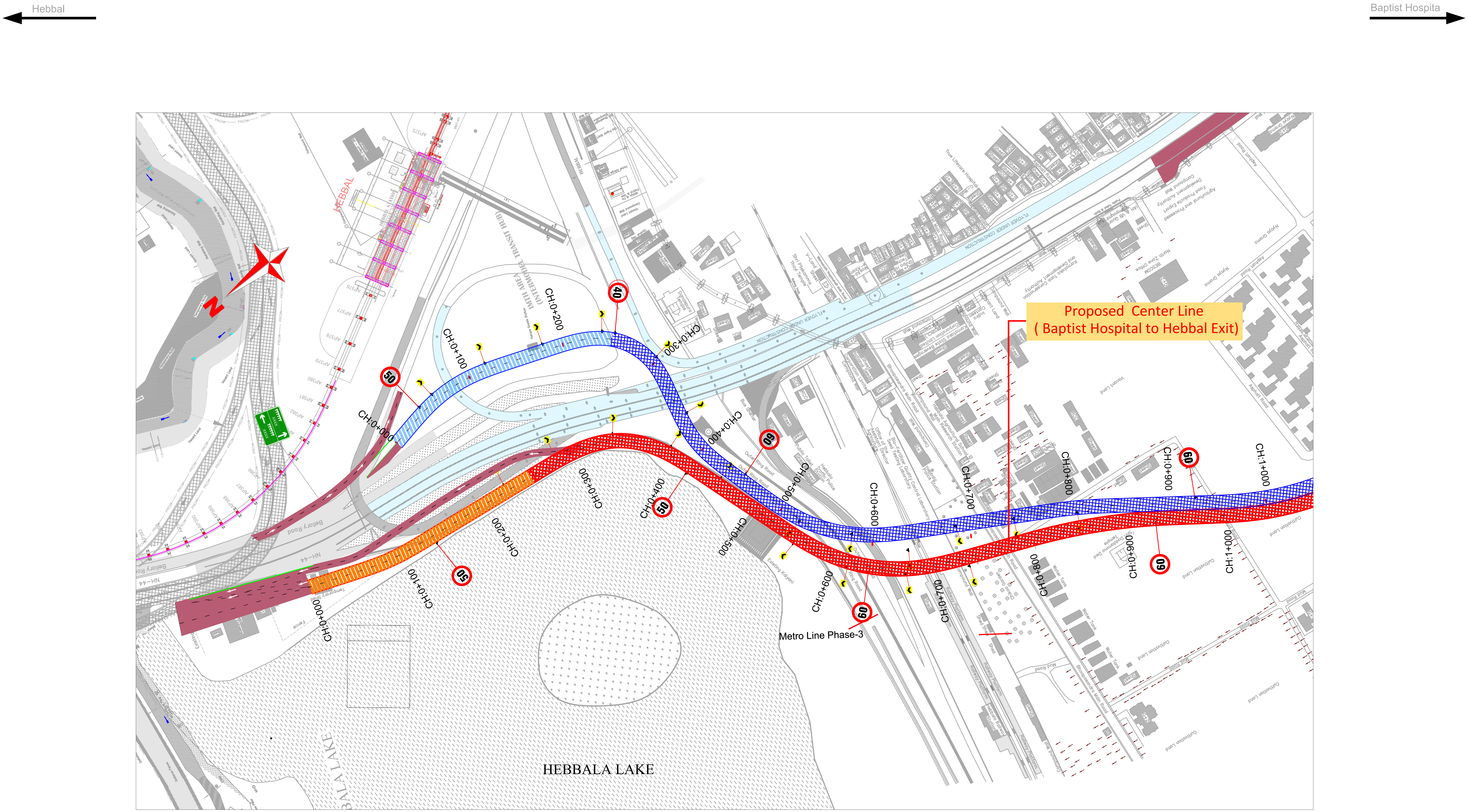
Drawing Title: TRAFFIC PLAN
(HEBBAL TO BAPTIST HOSPITAL ENTRY)

Drawing No. RC/1640/HO/HBT/TU/DWG/TP/ 02/R0

TRAFFIC PLAN
(BAPTIST HOSPITAL TO HEBBAL EXIT)


Hebbal
Baptist Hospita
N
Proposed Center Line
(Baptist Hospital to Hebbal Exit)
CH:0+000
CH:0+100
CH:0+200
CH:0+300
CH:0+400
CH:0+500
CH:0+600
CH:0+700
CH:0+800
CH:0+900
CH:1+000
40
50
60
Bellary Road
NH-44
HEBBAL
FLYOVER UNDER CONSTRUCTION
Metro Line Phase-3
HEBBALA LAKE

Legend

Plan

Proposed Open Cut (Entry Ramp)	▥
Proposed Cut & Cover (Entry Ramp)	▦
Proposed Open Cut (Exit Ramp)	▥
Proposed Cut & Cover (Exit Ramp)	▦
Proposed Diversion	▬

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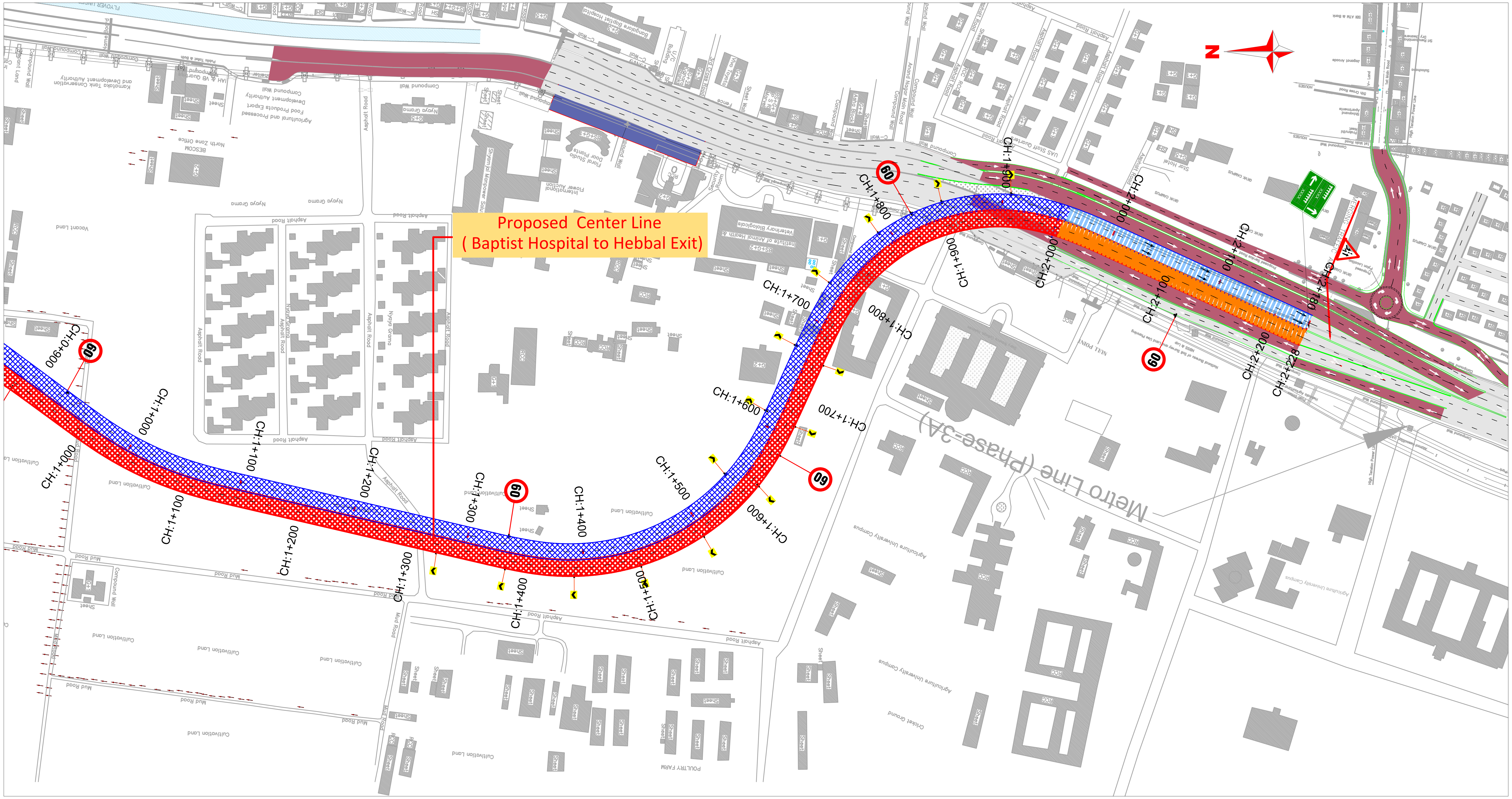
Project: **Consultancy Service for Preparation for DPR for short length transitory 3 lane bi-directional vehicular underpass connecting Hebbal flyover junction to Veterinary college via GKVK premises.**

Drawing Title: TRAFFIC PLAN
(BAPTIST HOSPITAL TO HEBBAL EXIT)

Drawing No. RC/1640/HO/HBT/TU/DWG/TP/ 03/R0

Hebbal ←

→ Baptist Hospita


Proposed Center Line
(Baptist Hospital to Hebbal Exit)
N
60
CH:0+900
CH:1+000
CH:1+000
CH:1+100
CH:1+100
CH:1+200
CH:1+200
CH:1+300
CH:1+300
CH:1+400
CH:1+400
CH:1+500
CH:1+500
CH:1+600
CH:1+600
CH:1+700
CH:1+700
CH:1+800
CH:1+800
CH:1+900
CH:1+900
CH:2+000
CH:2+000
CH:2+100
CH:2+100
CH:2+180
CH:2+200
CH:2+228
Metro Line (Phase-3A)

Legend

Plan

Proposed Open Cut (Entry Ramp)	▥
Proposed Cut & Cover (Entry Ramp)	▦
Proposed Open Cut (Exit Ramp)	▥
Proposed Cut & Cover (Exit Ramp)	▦
Proposed Diversion	🟥

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EE/B-SMILE	
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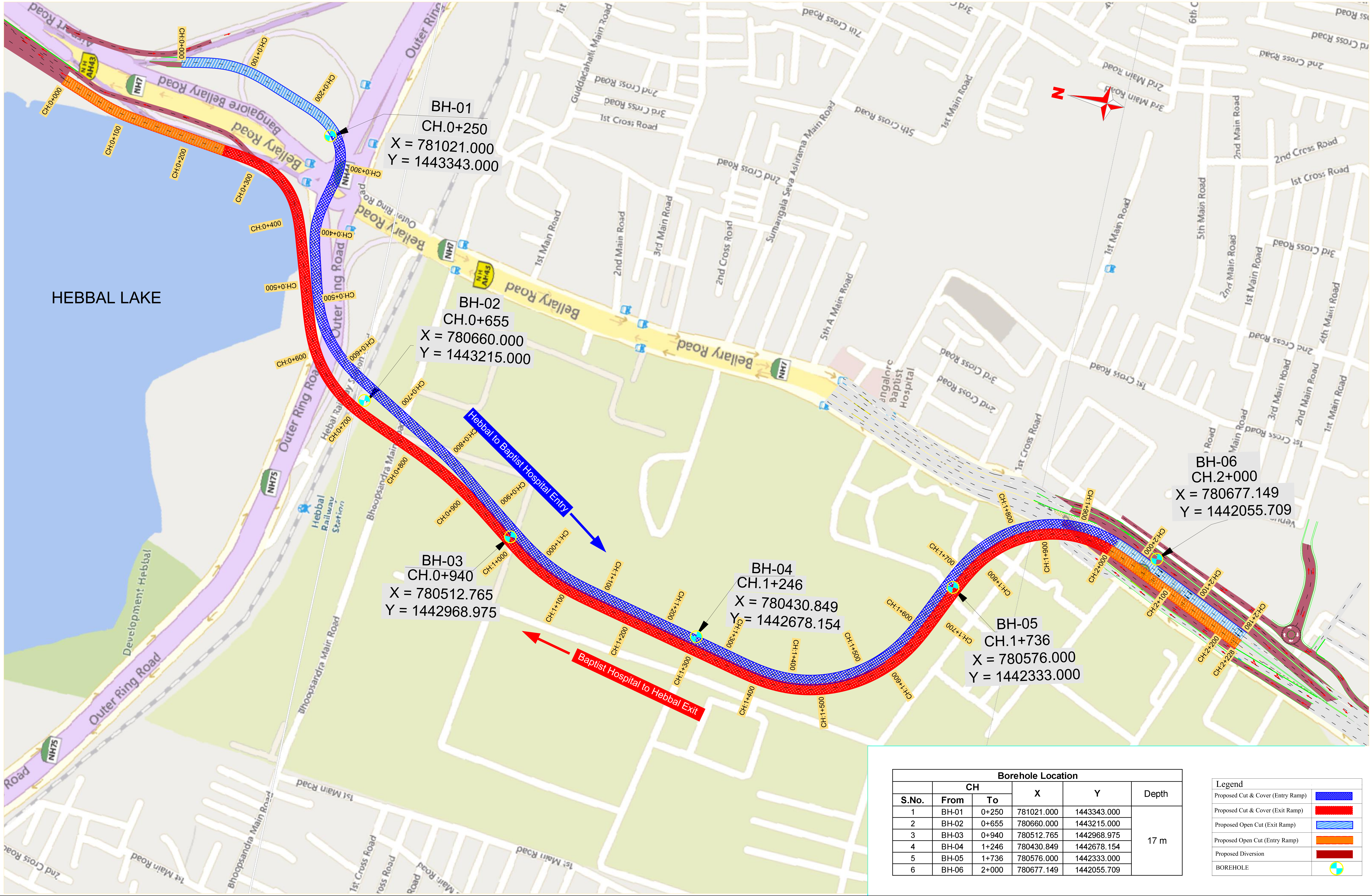
Drawing Title	TRAFFIC PLAN (BAPTIST HOSPITAL TO HEBBAL EXIT)
Drawing No.	RC/1640/HO/HBT/TU/DWG/TP/ 04/R0

BORE LOCATION.
(HEBBAL TO BAPTIST HOSPITAL


HEBBAL LAKE
BH-01
CH.0+250
X = 781021.000
Y = 1443343.000
BH-02
CH.0+655
X = 780660.000
Y = 1443215.000
BH-03
CH.0+940
X = 780512.765
Y = 1442968.975
BH-04
CH.1+246
X = 780430.849
Y = 1442678.154
BH-05
CH.1+736
X = 780576.000
Y = 1442333.000
BH-06
CH.2+000
X = 780677.149
Y = 1442055.709
Hebbal to Baptist Hospital Entry
Baptist Hospital to Hebbal Exit
N
Bellary Road
Bangalore Bellary Road
Outer Ring Road
Hebbal Railway Station
Bhoopsandra Main Road
Development Hebbal
Sumangala Seva Ashrama Main Road
Guddadahalli Main Road
Bangalore Baptist Hospital
NH7
NH75
AH43
CH:0+000
CH:0+100
CH:0+200
CH:0+300
CH:0+400
CH:0+500
CH:0+600
CH:0+700
CH:0+800
CH:0+900
CH:1+000
CH:1+100
CH:1+200
CH:1+300
CH:1+400
CH:1+500
CH:1+600
CH:1+700
CH:1+800
CH:1+900
CH:2+000
CH:2+100
CH:2+200
CH:2+228
CH:2+180

Borehole Location					
	CH		X	Y	Depth
S.No.	From	To			
1	BH-01	0+250	781021.000	1443343.000	17 m
2	BH-02	0+655	780660.000	1443215.000	
3	BH-03	0+940	780512.765	1442968.975	
4	BH-04	1+246	780430.849	1442678.154	
5	BH-05	1+736	780576.000	1442333.000	
6	BH-06	2+000	780677.149	1442055.709	

Legend	
Proposed Cut & Cover (Entry Ramp)	▨
Proposed Cut & Cover (Exit Ramp)	🟥
Proposed Open Cut (Exit Ramp)	▨
Proposed Open Cut (Entry Ramp)	🟧
Proposed Diversion	🟥
BOREHOLE	◐

REVISION	DATE	AMENDMENT \ ISSUE DESCRIPTION
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BENGALURU SMART INFRASTRUCTURE LIMITED

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CULTURAL CENTRE BUILDING
NEW DELHI - 110001 (INDIA)

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Checked:	AT
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Scale :- As Shown
Sheet size: A2

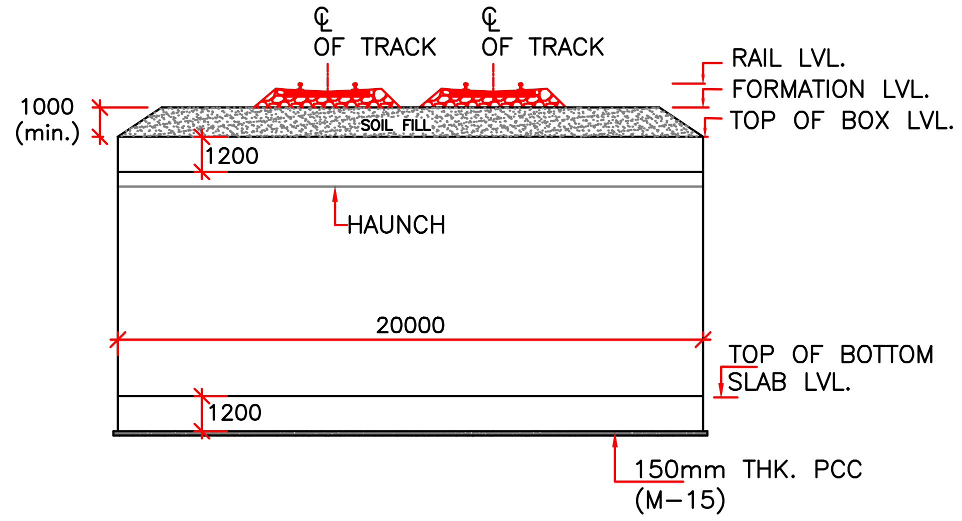
Project: **Consultancy Service for Preparation for DPR for short length transitory 3 lane bi-directional vehicular underpass connecting Hebbal flyover junction to Veterinary college via GKVK premises**

Drawing Title: GEOTECHNICAL INVESTIGATION PLAN
(HEBBAL TO BAPTIST HOSPITAL ENTRY)
AND
(BAPTIST HOSPITAL TO HEBBAL EXIT)

Drawing No.: RC/1640/HO/HBT/TU/DWG/PLAN/ 01/R0

STRUCTURES

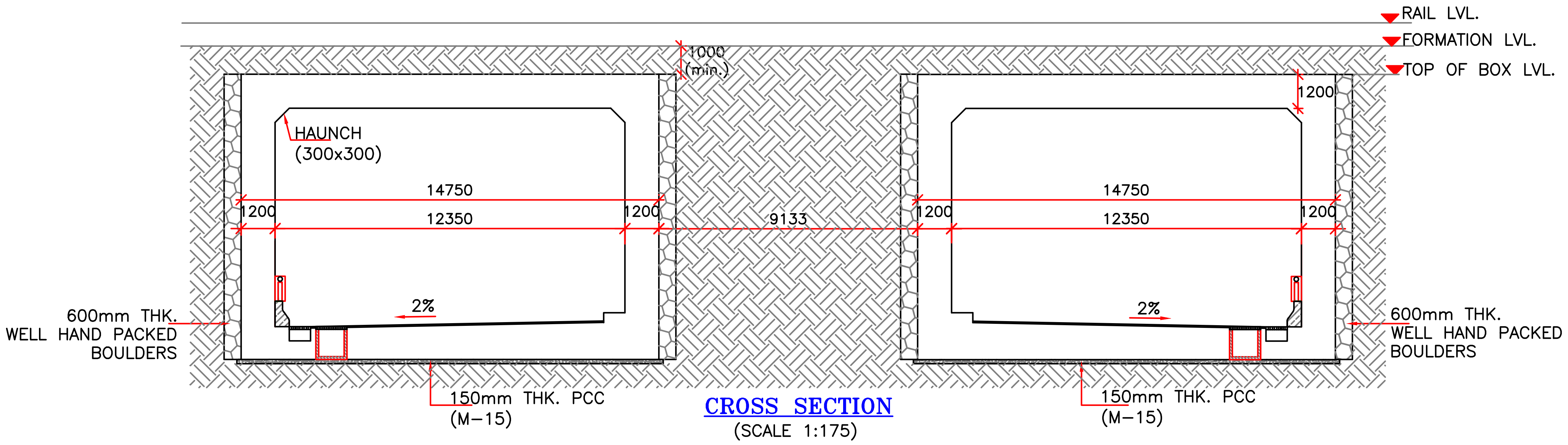
RUB


℄ OF TRACK
℄ OF TRACK
RAIL LVL.
FORMATION LVL.
TOP OF BOX LVL.
1000 (min.)
SOIL FILL
1200
HAUNCH
20000
TOP OF BOTTOM SLAB LVL.
1200
150mm THK. PCC (M–15)

CHAINAGE OF TUNNEL–1	0+627	0+647
CHAINAGE OF TUNNEL–2	0+686	0+706

SECTION A–A

(SCALE 1:250)


RAIL LVL.
FORMATION LVL.
TOP OF BOX LVL.
1000 (min.)
1200
HAUNCH (300x300)
14750
12350
1200
1200
9133
1200
14750
12350
1200
2%
2%
600mm THK. WELL HAND PACKED BOULDERS
600mm THK. WELL HAND PACKED BOULDERS
150mm THK. PCC (M–15)
150mm THK. PCC (M–15)

CROSS SECTION

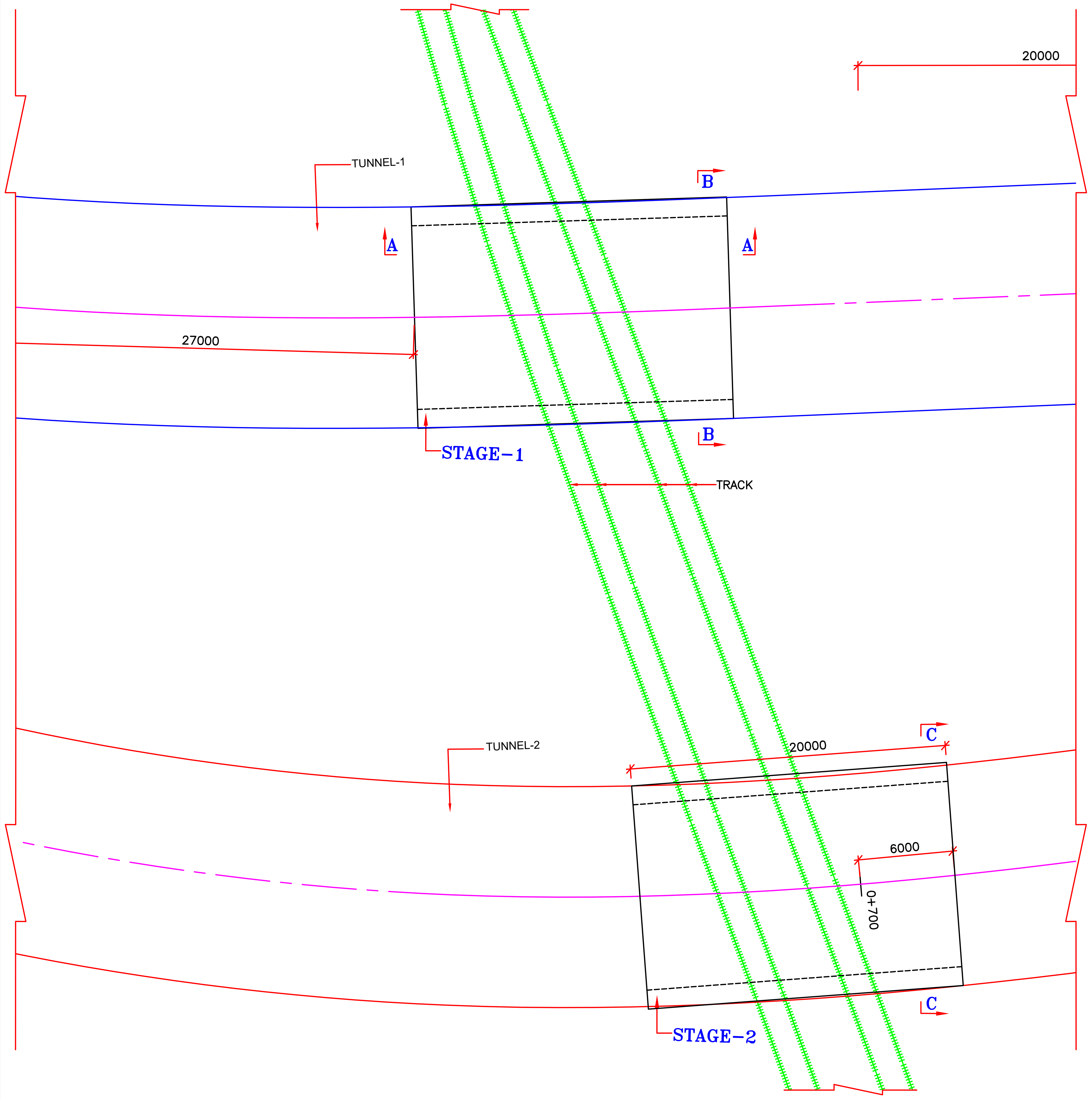
(SCALE 1:175)

MYTHOLOGY:-

1. THE CONSTRUCTION OF RUB WILL BE DONE IN 2 STAGES BY BOX PUSHING METHOD.
2. THE FIRST STAGE WILL BE DONE IN TUNNEL–1 AFTER THAT THE SECOND STAGE WILL BE DONE IN TUNNEL–2.

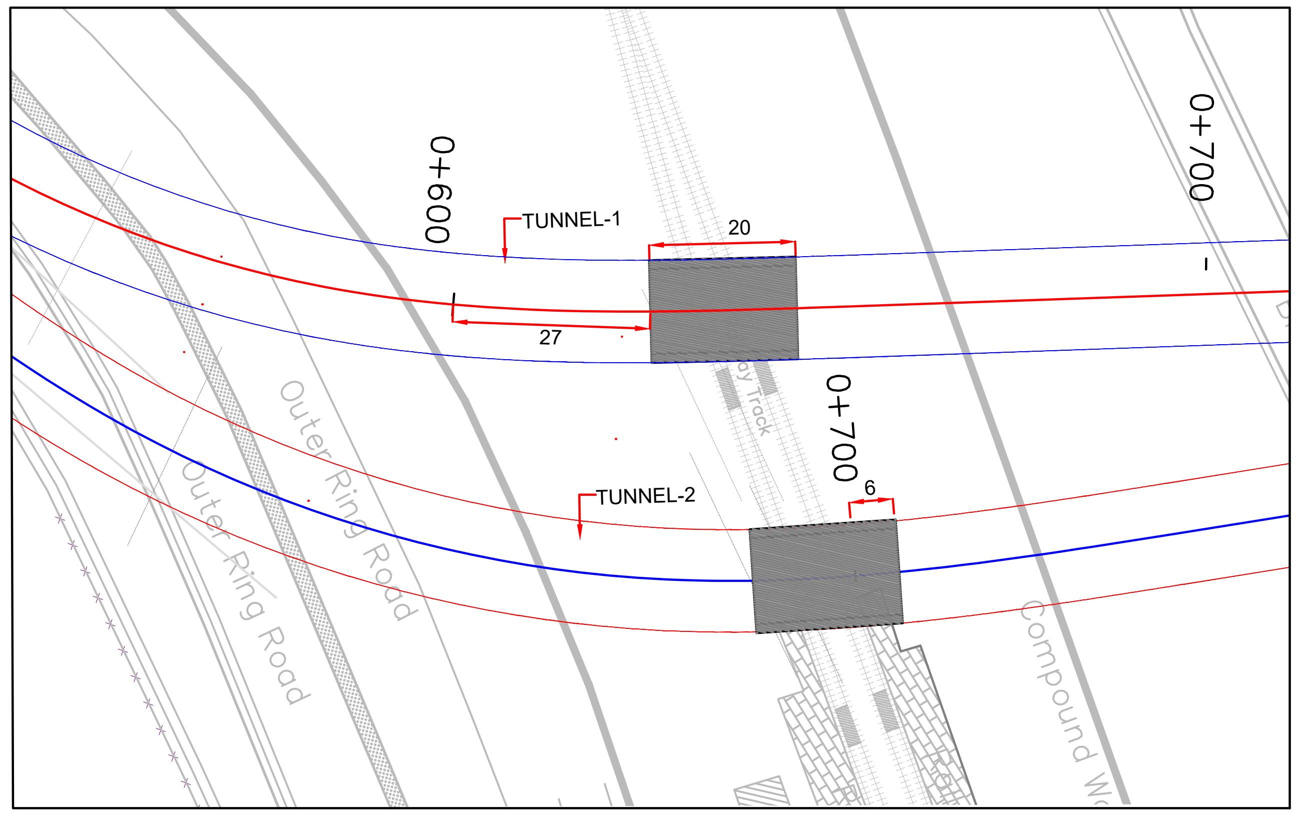
NOTES :-

1. ALL DIMENSIONS ARE IN MILLIMETER AND LEVELS IN METERS, UNLESS OTHERWISE SPECIFIED. NO DIMENSIONS SHALL BE SCALED, ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
2. THE DESIGN OF BRIDGE SHALL BE CARRIED OUT AS PER INDIAN RAILWAY CODES, MANUAL, STANDARDS AND OTHER RELEVANT IRC/BIS/INTERNATIONAL CODES APPLICABLE FOR INDIAN RAILWAYS
3. CONCRETE SHALL BE DESIGN MIX AND HAVE A MINIMUM 28DAYS CHARACTERISTIC STRENGTH ON 150mm CUBES FOR VARIOUS COMPONENTS AS FOLLOWS:
   - RCC BOX STRUCTURE – M35
   - PCC LEVELING COURSE – M15
5. THE REINFORCING STEEL SHALL BE CORROSION RESISTANT TMT H.Y.S.D. BARS (GRADE DESIGNATION Fe–500D) CONFORMING TO IS:1786
6. BACK FILLING BEHIND ABUTMENTS AND WING WALLS/RETURN WALLS AND TRANSITION SYSTEM IN APPROACHES SHALL BE CARRIED OUT AS PER PROVISIONS OF GE–R:50.
7. 300mm STONE PITCHING OVER 200mm FILTER MEDIA SHALL BE PROVIDED FOR PROTECTION OF SLOPES.
8. THE DESIGN OF FOUNDATION IS BASED ON ASSUMED SAFE BEARING CAPACITY OF RETAINING WALL 180 kN/m2.
9. THE PROPOSED BRIDGES SHALL BE DESIGNED FOR SEISMIC ZONE–II AS PER PROVISION OF RDSO GUIDELINES OF SEISMIC DESIGN OF RAILWAYS BRIDGES ISSUED IN JANUARY 2015.
10. WORK SCHEME SHALL BE SUCH THAT ADJACENT IR TRACKS IS NOT AFFECTED IN ANY WAY. HOWEVER, IF IT IS INESCAPABLE, TEMPORARY SPEED RESTRICTION SHALL BE IMPOSED WITH APPROVAL FROM RAILWAY AUTHORITIES.
11. STEPS FROM BED LEVEL TO FORMATION LEVEL SHALL BE PROVIDED ON EMBANKMENT SLOPE BEHIND BOX.


20000
TUNNEL-1
B
A
A
27000
B
STAGE–1
TRACK
TUNNEL-2
20000
C
6000
0+700
C
STAGE–2

PLAN

(SCALE 1:250)


0+600
0+700
TUNNEL-1
20
27
0+700
TUNNEL-2
6
Outer Ring Road
Outer Ring Road
Compound Wa

KEY PLAN

(SCALE 1:1000)

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R0	SEP. 2025	-

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Bengaluru Smart Infrastructure Limited

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CONSULTANT:

RODIC CONSULTANTS PVT. LTD.
1, JAI SINGH MARG (FIRST FLOOR), YMCA
CULTURAL CENTRE BUILDING
NEW DELHI - 110001 (INDIA)

REVISED FINAL DETAILED PROJECT REPORT

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Drawn:	SB
Checked:	PKJ
Approved:	HRY

Scale :- AS SHOWN

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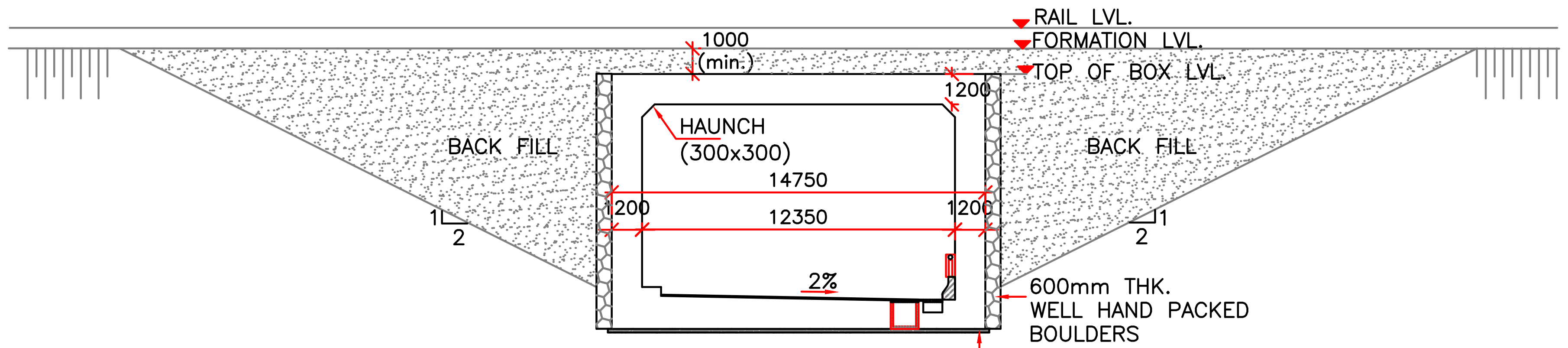
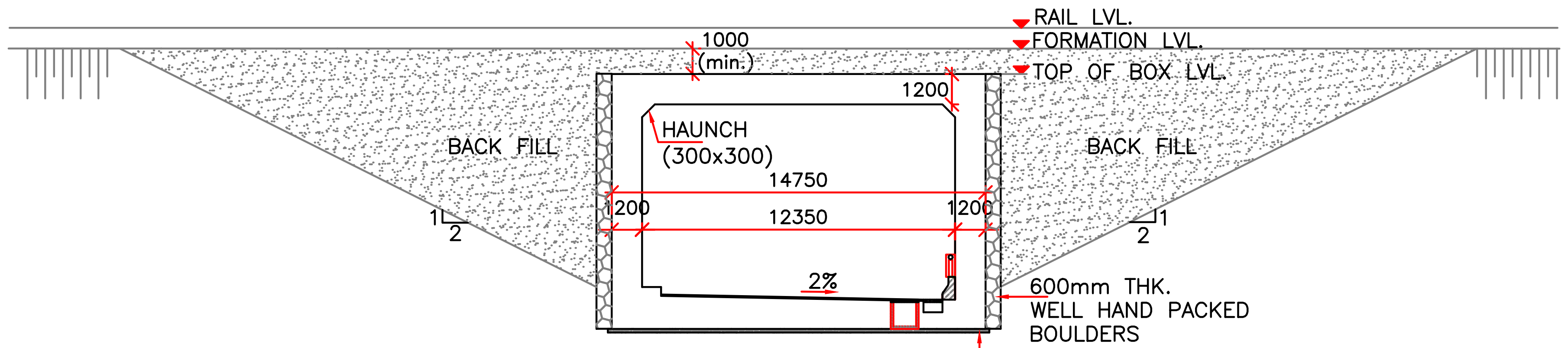
Drawing Title: GENERAL ARRANGEMENT DRAWING OF ROAD UNDER BRIDGE

Drawing No.: RC/1640/HO/HBT/TU/RUB/01/R0


RAIL LVL.
FORMATION LVL.
TOP OF BOX LVL.
1000
(min.)
1200
HAUNCH
(300x300)
BACK FILL
BACK FILL
14750
12350
1200
1200
1
2
1
2
2%
600mm THK.
WELL HAND PACKED
BOULDERS
150mm THK.
PCC (M-15)

SECTION B–B
STAGE–1
(SCALE 1:250)


RAIL LVL.
FORMATION LVL.
TOP OF BOX LVL.
1000
(min.)
1200
HAUNCH
(300x300)
BACK FILL
BACK FILL
14750
12350
1200
1200
1
2
1
2
2%
600mm THK.
WELL HAND PACKED
BOULDERS
150mm THK.
PCC (M-15)

SECTION C–C
STAGE–2
(SCALE 1:250)

STAGE-1

1. EXCAVATION ADJACENT TO THE TRACK
   (I) EXCAVATION EDGES DONE UP TO THE FOUNDATION LEVEL OF THE BOX TACKING SUFFICIENT CARE FOR SAFETY OF RUNNING TRACK.
2. PREPARATION OF CASTING BED
   (I) CASTING BED SHOULD BE PREPARED WITH SKID CONCRETE LAYER ON TOP WHICH HELPS IN THE PUSHING OPERATION OF THE BOX.
3. CASTING OF THE CONCRETE BOX
   (I) THE CONCRETE BOX SHOULD BE CAST IN–SITU ON THE CASTING BED.
4. FIXING TEMPORARY GIRDERS
   (I) TEMPORARY GIRDERS SHOULD BE FIXED UNDER THE RAILWAY TRACK AFTER TAKING SUITABLE DURATION BLOCK.
   (II) OPERATION OF TRAINS CONTINUES OVER THESE TEMPORARY GIRDERS.
5. PUSHING OF THE PRECAST CONCRETE BOX
   (I) SOIL UNDER THE RAILWAY LINE SHOULD BE CAREFULLY EXCAVATED SO THAT TEMPORARY GIRDERS REMAIN INTACT FOR A SUITABLE DURATION AND THE TRACK BLOCK IS CLEARED.
   (II) THE PRECAST CONCRETE BOX SHOULD BE PUSHED UNDER THE RAILWAY TRACK USING HYDRAULIC JACKS AND CRANES.
6. REMOVAL OF TEMPORARY GIRDERS
   (I) AFTER THE BOX IS SUITABLY POSITIONED, THE TEMPORARY GIRDERS SHOULD BE REMOVED, AND THE SAME TRACK PANELS SHOULD BE RE–LAID OVER THE BOX IN THE SAME BLOCK.

STAGE-2

1. THE SAME METHOD AS STAGE –1 WILL BE REPEATED IN STAGE –2.

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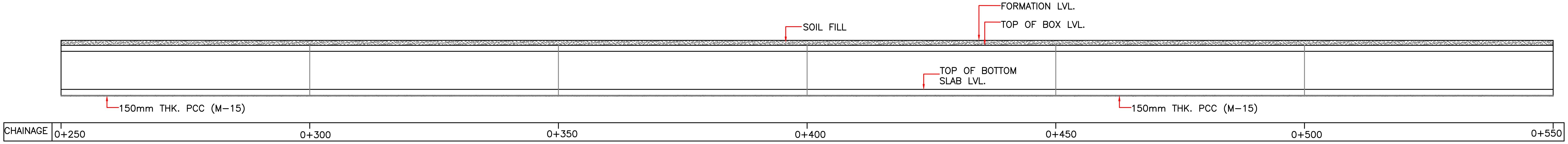
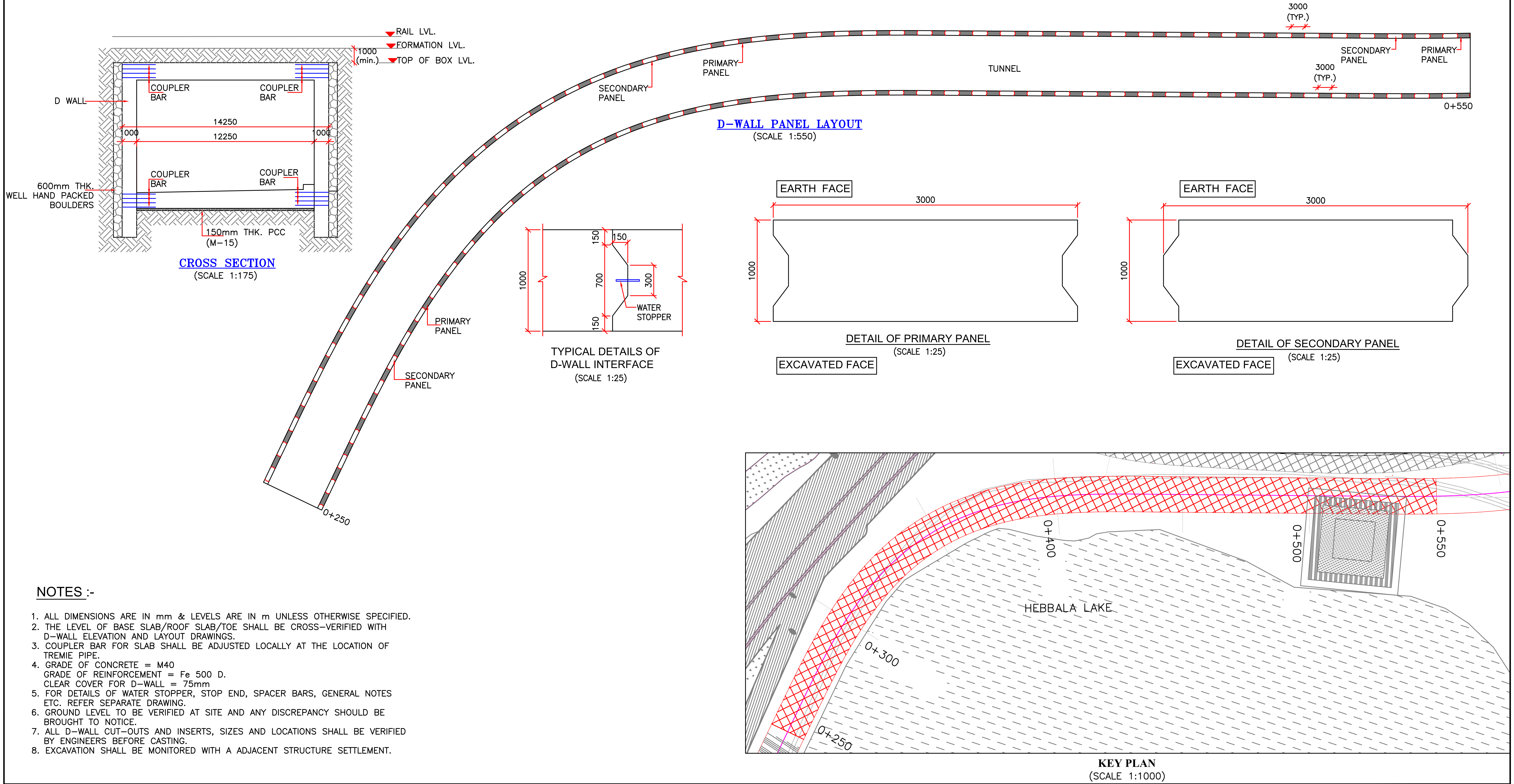
D-WALL


FORMATION LVL.
TOP OF BOX LVL.
SOIL FILL
TOP OF BOTTOM SLAB LVL.
150mm THK. PCC (M−15)
150mm THK. PCC (M−15)
CHAINAGE
0+250
0+300
0+350
0+400
0+450
0+500
0+550

ELEVATION OF D−WALL
(SCALE 1:550)


RAIL LVL.
FORMATION LVL.
TOP OF BOX LVL.
1000 (min.)
D WALL
COUPLER BAR
COUPLER BAR
14250
12250
1000
1000
COUPLER BAR
COUPLER BAR
600mm THK. WELL HAND PACKED BOULDERS
150mm THK. PCC (M−15)
CROSS SECTION
(SCALE 1:175)
3000 (TYP.)
3000 (TYP.)
SECONDARY PANEL
PRIMARY PANEL
PRIMARY PANEL
SECONDARY PANEL
TUNNEL
0+550
D−WALL PANEL LAYOUT
(SCALE 1:550)
PRIMARY PANEL
SECONDARY PANEL
0+250
150
150
700
300
150
1000
WATER STOPPER
TYPICAL DETAILS OF D-WALL INTERFACE
(SCALE 1:25)
EARTH FACE
3000
1000
DETAIL OF PRIMARY PANEL
(SCALE 1:25)
EXCAVATED FACE
EARTH FACE
3000
1000
DETAIL OF SECONDARY PANEL
(SCALE 1:25)
EXCAVATED FACE
0+400
0+500
0+550
HEBBALA LAKE
0+300
0+250

KEY PLAN
(SCALE 1:1000)

NOTES :-

1. ALL DIMENSIONS ARE IN mm & LEVELS ARE IN m UNLESS OTHERWISE SPECIFIED.
2. THE LEVEL OF BASE SLAB/ROOF SLAB/TOE SHALL BE CROSS−VERIFIED WITH D−WALL ELEVATION AND LAYOUT DRAWINGS.
3. COUPLER BAR FOR SLAB SHALL BE ADJUSTED LOCALLY AT THE LOCATION OF TREMIE PIPE.
4. GRADE OF CONCRETE = M40
   GRADE OF REINFORCEMENT = Fe 500 D.
   CLEAR COVER FOR D−WALL = 75mm
5. FOR DETAILS OF WATER STOPPER, STOP END, SPACER BARS, GENERAL NOTES ETC. REFER SEPARATE DRAWING.
6. GROUND LEVEL TO BE VERIFIED AT SITE AND ANY DISCREPANCY SHOULD BE BROUGHT TO NOTICE.
7. ALL D−WALL CUT−OUTS AND INSERTS, SIZES AND LOCATIONS SHALL BE VERIFIED BY ENGINEERS BEFORE CASTING.
8. EXCAVATION SHALL BE MONITORED WITH A ADJACENT STRUCTURE SETTLEMENT.

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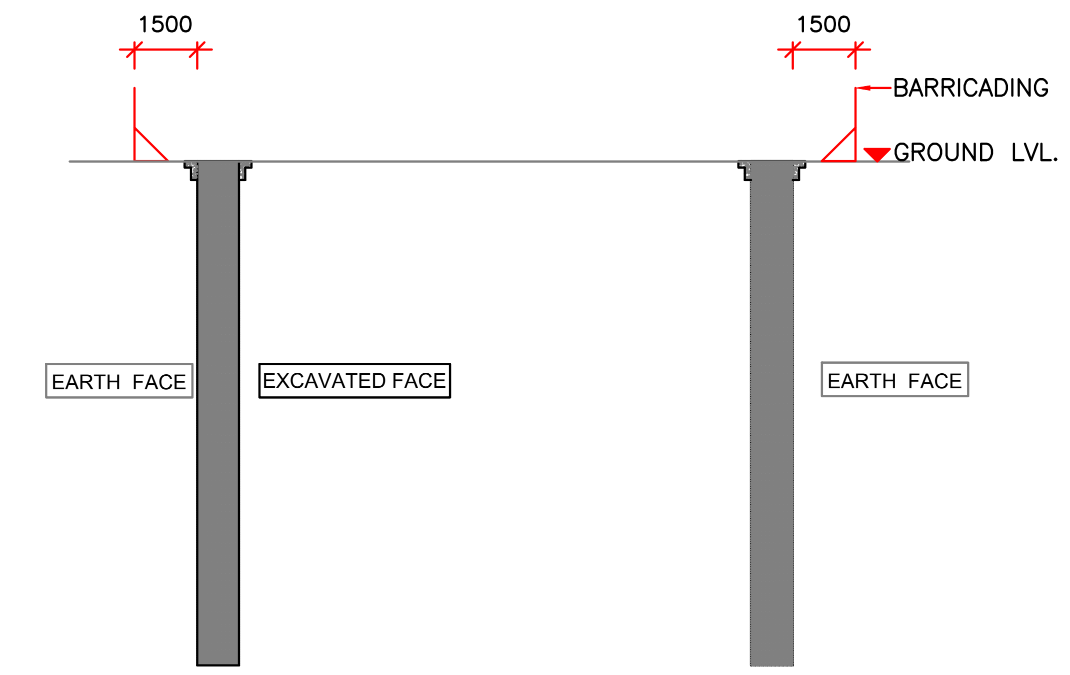
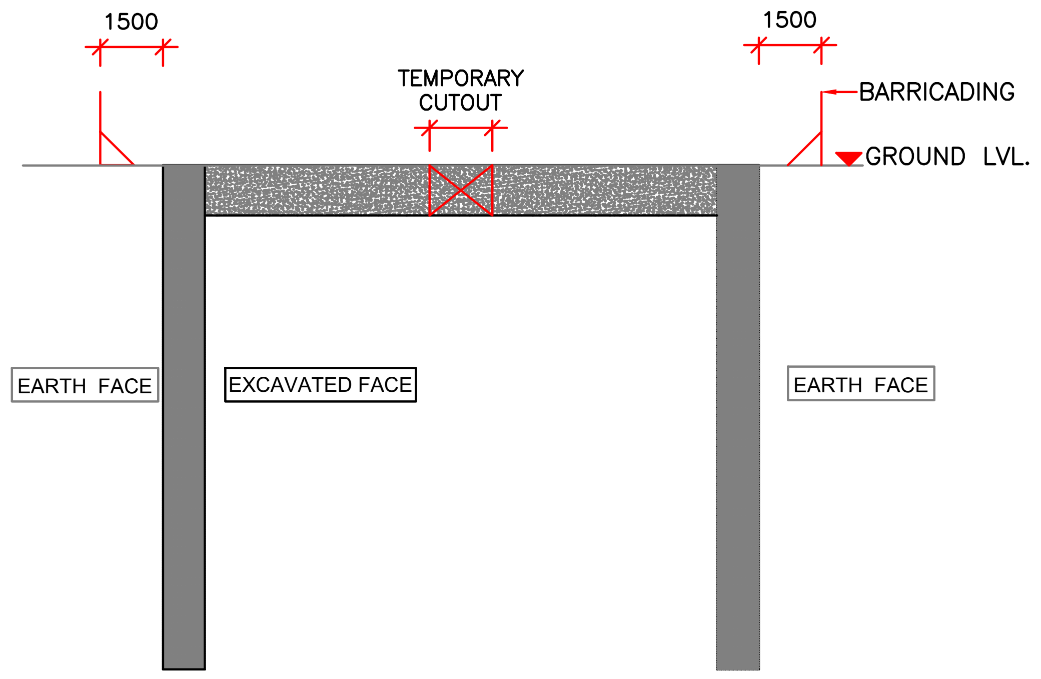
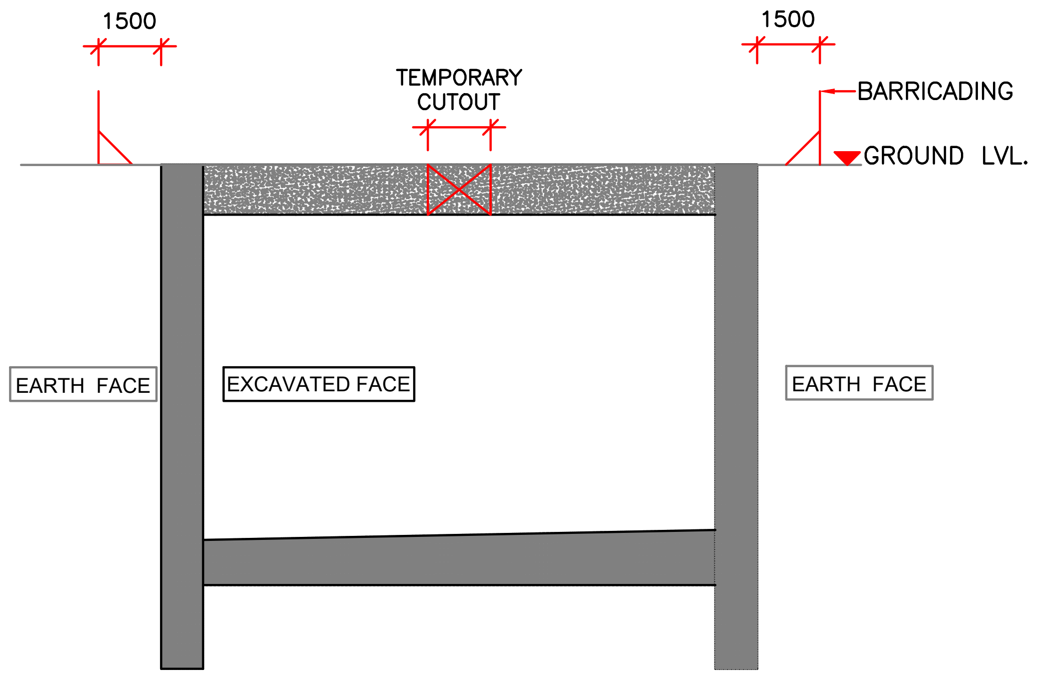
Drawing No.: RC/1640/HO/HBT/TU/DW/01/R0


1500
1500
BARRICADING
GROUND LVL.
EARTH FACE
EXCAVATED FACE
EARTH FACE

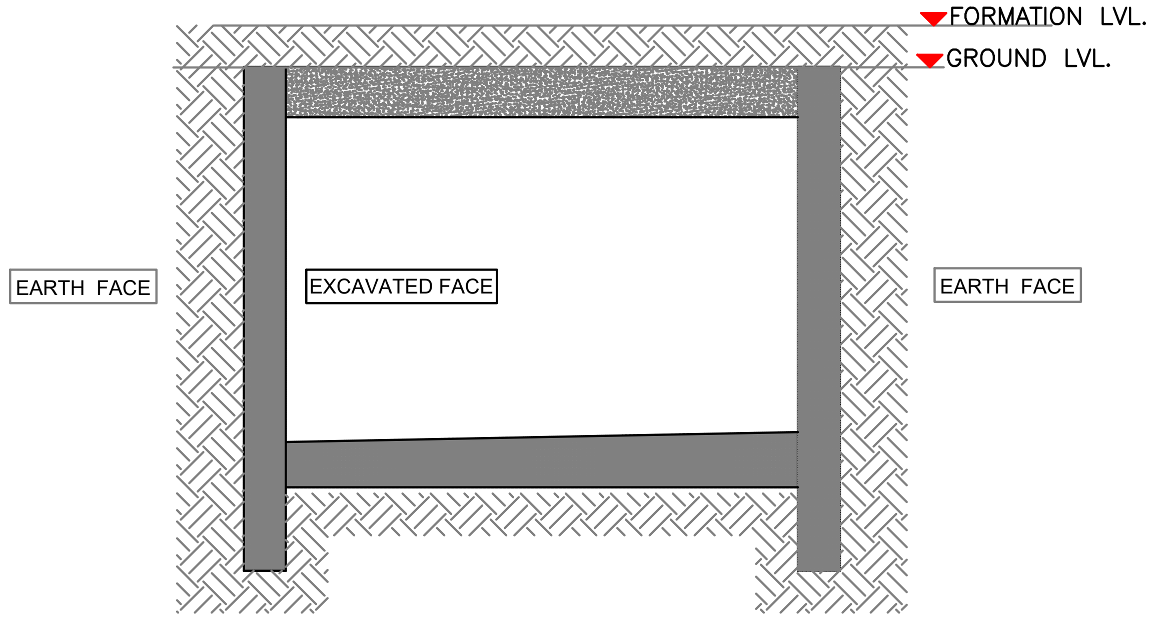
STAGE (1)
D–WALL
1.1) DIVERT THE TRAFFIC AS PER PROPOSED TRAFFIC DIVERSION PLAN.
1.2) BARRICADE FULL WIDTH OF CROSS OVER AREA.
1.3) RE–LOCATE UTILITIES (IF ANY) IN THE VICINITY.
1.4) INSTALL GUIDE WALL AS PER D–WALL LAYOUT.
1.5) CONSTRUCT D–WALL UP TO GROUND LEVEL.


1500
1500
TEMPORARY
CUTOUT
BARRICADING
GROUND LVL.
EARTH FACE
EXCAVATED FACE
EARTH FACE

STAGE (2)
2.1) AFTER D–WALL ATTAINS SUFFICIENT STRENGTH EXCAVATE IN
SOIL UP TO SOFFIT OF ROOF SLAB.
2.2) LAY PCC AT SOFFIT OF ROOF SLAB
2.3) CAST ROOF SLAB BY LEAVING CUT–OUT AT DESIRED LOCATION
AND LEAVE COUPLER IN SLAB TEMPORARY CUT–OUTS.


1500
1500
TEMPORARY
CUTOUT
BARRICADING
GROUND LVL.
EARTH FACE
EXCAVATED FACE
EARTH FACE

STAGE (3)
3.1) EXCAVATE UPTO SOFFIT OF BASE SLAB.
3.2) LAY PCC BELOW BASE SLAB, WITH WATER PROOFING MEMBRANE AS
PER SPECIFICATION.
3.3) CAST BASE SLAB.


FORMATION LVL.
GROUND LVL.
EARTH FACE
EXCAVATED FACE
EARTH FACE

STAGE (4)
4.1) CAST TEMPORARY AND MUCK CUTOUT AT ROOF SLAB.
4.2) PLACE WATER PROOFING MEMBRANE AS PER SPECIFICATION ABOVE
ROOF SLAB..
4.3) PLACE BACK FILL MATERIAL (AS PER OCS) UP TO THE GROUND
LEVEL.
4.4) REMOVE BARRICADE.
4.5) REINSTATE THE GROUND LEVEL AS PER ARCHITECTURAL
REINSTATEMENT DRAWING..

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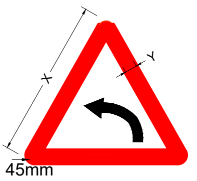
Drawing No.: RC/1640/HO/HBT/TU/ DW/02/R0

STANDARD DRAWING S

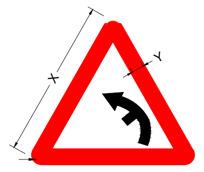
INDEX :

Sr.No.	DRAWINGS	DRAWING NO.
	ROAD SIGNS	
1	STANDARD DRAWINGS TYPICAL DETAIL OF CAUTIONARY WARNING SIGNS	RC/1640/HO/HBT/TU/DWG/RS/01/R0
2	STANDARD DRAWINGS TYPICAL DETAIL OF MANDATORY REGULATORY SIGNS	RC/1640/HO/HBT/TU/DWG/RS/01/R0
3	STANDARD DRAWINGS TYPICAL DETAIL OF MANDATORY / REGULATORY SIGNS	RC/1640/HO/HBT/TU/DWG/RS/01/R0
4	STANDARD DRAWINGS DETAIL OF INFORMATORY SIGNS	RC/1640/HO/HBT/TU/DWG/RS/01/R0
5	STANDARD DRAWINGS DETAIL OF INFORMATORY SIGNS	RC/1640/HO/HBT/TU/DWG/RS/01/R0
	ROAD MARKING	
6	STANDARD DRAWINGS TYPICAL DETAIL OF LANE MARKING	RC/1640/HO/HBT/TU/DWG/RM/01/R0
7	STANDARD DRAWINGS TYPICAL DETAIL OF ARROW MARKINGS	RC/1640/HO/HBT/TU/DWG/RM/01/R0
8	STANDARD DRAWINGS TYPICAL DETAILS FOR PAVEMENT MARKINGS.	RC/1640/HO/HBT/TU/DWG/RM/01/R0
	STANDARD DRAWINGS TYPICAL CAUTIONARY SIGNS	RC/1640/HO/HBT/TU/DWG/CS/01/R0

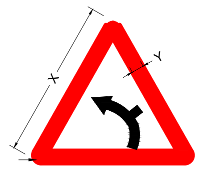
CAUTIONARY / WARNING SINGS



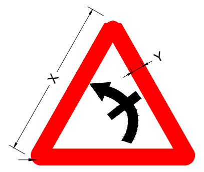
RADIUS 45mm
Left Hand Curve
FIG 15.01



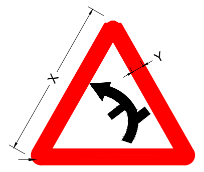
Left Side Road on Left Hand Curve
FIG 15.01a



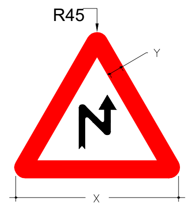
Right Side Road on Left Hand Curve
FIG 15.01b



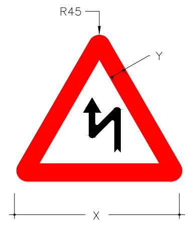
Cross Road on Left Curve
FIG 15.01c



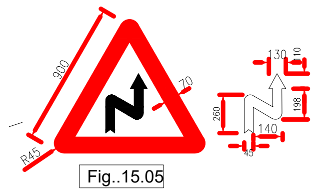
Staggered Intersection on Left Curve
FIG 15.01d



REVERSE BEND (RIGHT)
FIG 15.05



REVERSE BEND (LEFT)
FIG-15.06


900
70
R45
130
10
260
198
140
45
Fig..15.05
RIGHT REVERSE BEND

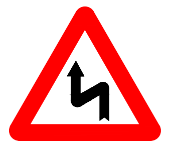
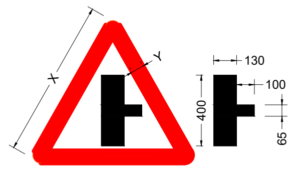
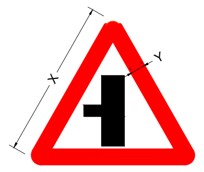
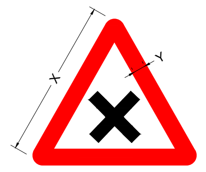


Fig..15.06
LEFT REVERSE BEND

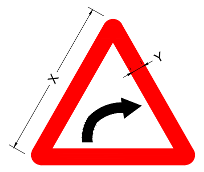

X
Y
130
100
400
65
SIDE ROAD RIGHT
FIG 15.09



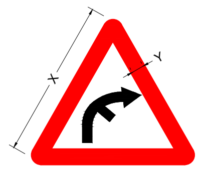
SIDE ROAD LEFT
FIG 15.10



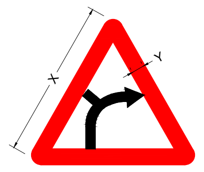
CROSS ROAD
FIG 15.14



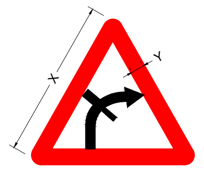
Right Hand Curve
FIG 15.02



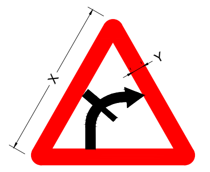
Right Side Road on Right Hand Curve
FIG 15.02a



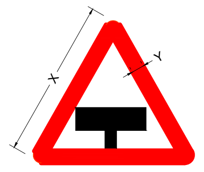
left Side Road on Right Curve
FIG 15.02b



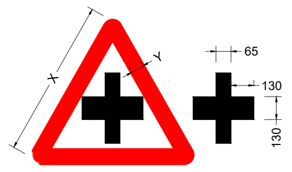
Cross Road on Right Curve
FIG 15.02c

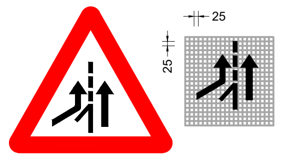


Staggered Intersection on Right Curve
FIG 15.02d

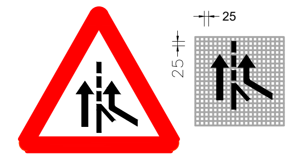


T-INTERSECTION
MAJOR ROAD AHEAD
FIG 15.18

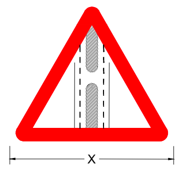

X
Y
65
130
130
MAJOR ROAD AHEAD
FIG 15.19



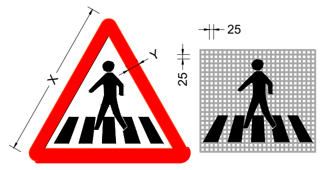
MERGING TRAFFIC AHEAD
(FROM LEFT)
FIG 15.22



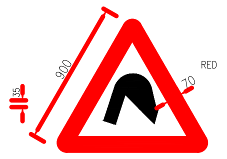
MERGING TRAFFIC AHEAD
(FROM RIGHT)
FIG 15.22a



GAP IN MEDIAN
FIG 15.32



PEDESTRIAN CROSSING
FIG 15.33


900
70
RED
35
Fig.15.03
RIGHT HAIR PIN BEND

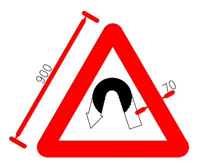


Fig.15.04

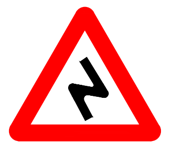


Fig.15.07
Series of Bends

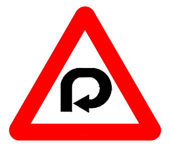
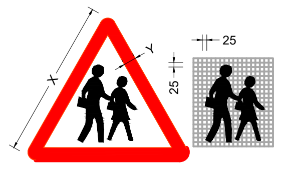
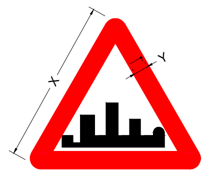


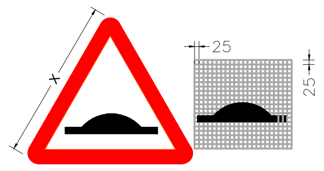
Fig.15.07
Series of Bends



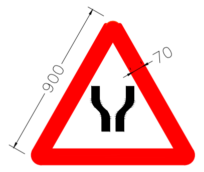
School Ahead
FIG 15.34



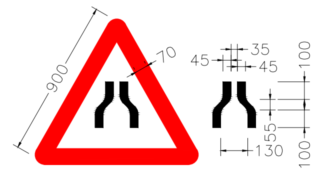
Built-up Area
FIG 15.35



Speed Breaker
FIG 15.49



Road Widens
FIG 15.24


900
70
45
35
45
55
130
100
100
Narrow Road Ahead
FIG 15.23

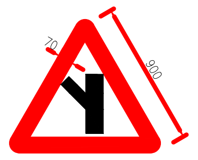


Fig.15.11
Y-Intersection

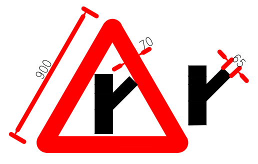
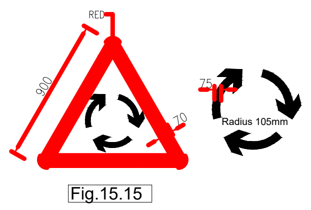


Fig.15.12
Y-Intersection


RED
900
70
75
Radius 105mm
Fig.15.15
Round About

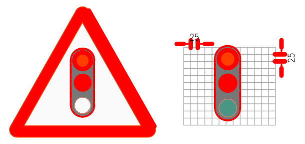
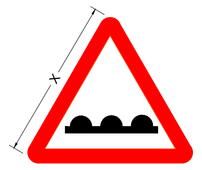
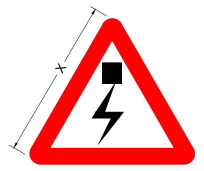


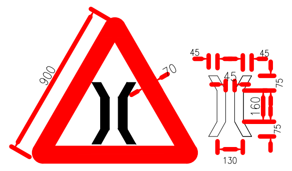
Fig. 15.16
Traffic Signals



Rumble Strips
FIG 15.50



Overhead Cables
FIG 15.57


900
70
45
45
45
75
160
75
130
Fig.15.25
Narrow Bridge

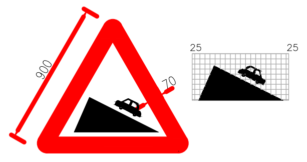
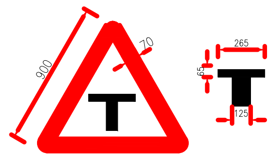


Fig.15.27
Speed Ascent


900
70
265
65
125
Fig. 15.17
T-intersection

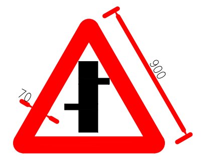


Fig.15.20
Staggered Intersection

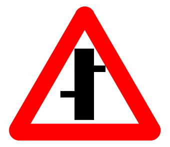
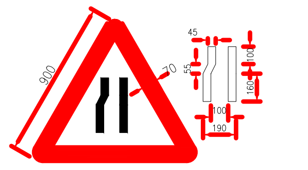
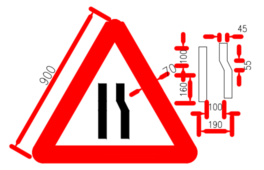
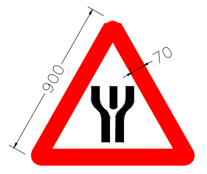


Fig.15.21
Staggered Intersection


900
70
45
55
100
160
100
190
Fig.15.28
Reduced Carriageway
Left Lane (s) Reduced


900
70
45
100
55
160
100
190
Fig.15.29
Reduced Carriageway
Left Lane (s) Reduced



Start of Dual Carriageway
FIG 15.30

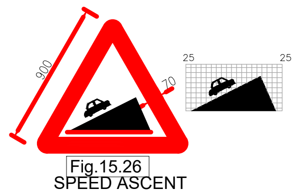
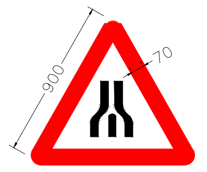
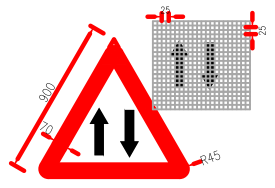
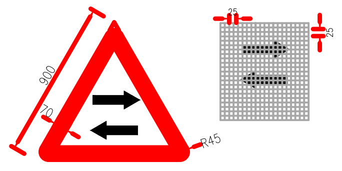


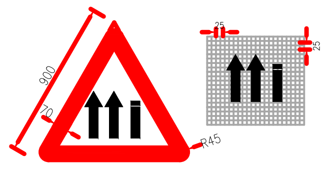
Fig.15.26
SPEED ASCENT

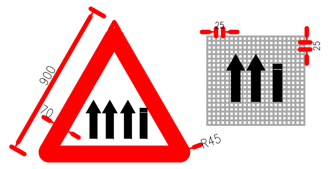


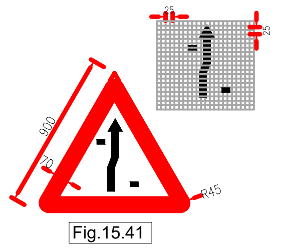
End of Dual Carriageway
FIG 15.31


900
70
R45
25
25
Fig.15.36
Two Way Operation


900
70
R45
25
25
Fig.15.37
Two Way Traffic on Cross Road
Ahead Warning


900
70
R45
25
25
Fig.15.39
Lane Closed
(Three Lane Carriageway)


900
70
R45
25
25
Fig.15.40
Lane Closed
(Four Lane Carriageway)


900
70
R45
25
25
Fig.15.41
Traffic Diversion on Dual Carriageway

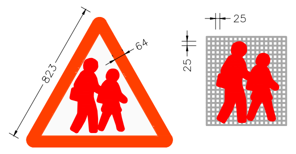


Fig.15.34
SCHOOL AHEAD

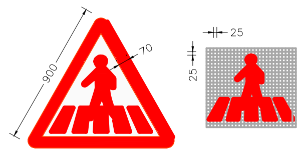


Fig.15.33
PEDESTRIAN CROSSING

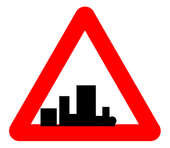


Fig.15.35
BUILT -UP AREA

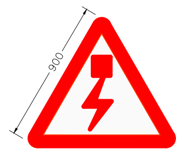


Fig.15.57
Overhead Cables

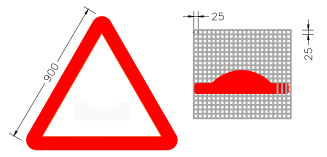


Fig.15.48
Dangerous Dip

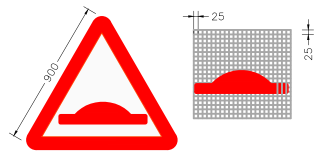


Fig.15.49
Speed Breaker

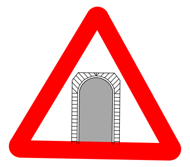


Fig. 15.62
TUNNEL AHEAD

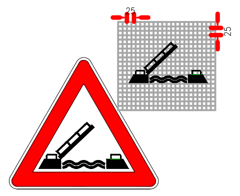
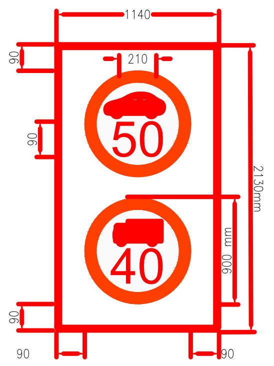
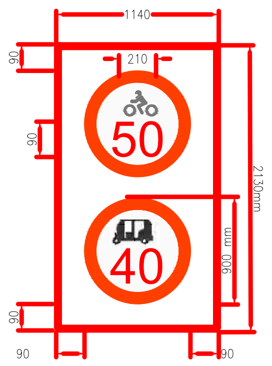


Fig.15.56
Opening or Swing Bridge


1140
210
90
90
90
50
40
2130mm
900 mm
90
90
Fig. 14.40
Maximum Speed Limit
(Vehicle Type)


1140
210
90
90
90
50
40
2130mm
900 mm
90
90
Fig. 14.40b
Maximum Speed Limit
(Vehicle Type)

NOTES
1. ALL THE DIMENSIONS ARE IN MILLIMETERS UNLESS AND OTHERWISE SPECIFIED.
2. THE SIGN SHALL BE IN THE SHAPE OF AN EQUILATERAL TRIANGLE, WITH APEX POINTING UPWARD IT SHALL HAVE RED BORDER AND BLACK SYMBOLS ON WHITE BACKGROUND. THE SIZE PLACEMEN DETAILS SHALL BE AS PER TABLE 15.1 of IRC:67:2022.
3. SPECIFICATIONS OF THE REFLECTIVE SHEETING SHOULD BE OF CLASS B SHEETING: - HIGH INTENSITY MICRO PRISMATIC GRADE SHEETING AS PER ASTM-4956-04 TYPE IV,

REVISION	DATE	AMENDMENT \ ISSUE DESCRIPTION
R0	Sep.:- 2025	-

CLIENT
GOVERNMENT OF KARNATAKA
Bengaluru Smart Infrastructure Limited

AE/B-SMILE	
AEE/B-SMILE	
EE/B-SMILE	
EIC-B-SMILE	

CONSULTANT:
RODIC CONSULTANTS PVT. LTD.
1, JAI SINGH MARG (FIRST FLOOR), YMCA
CULTURAL CENTRE BUILDING
NEW DELHI - 110001 (INDIA)

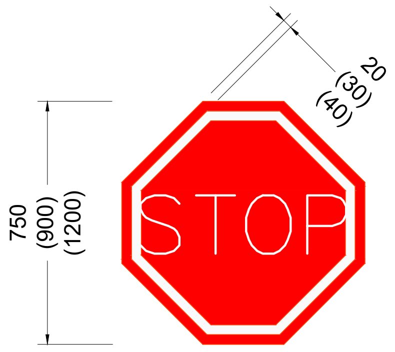
REVISED FINAL DETAILED PROJECT REPORT

Designed:	RR	
Drawn:	SS	
Checked:	AT	
Approved:	HRY	

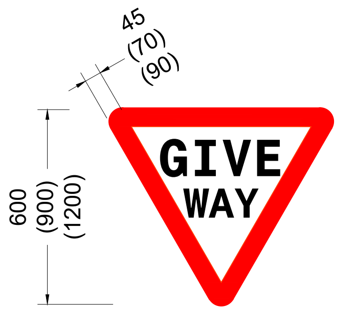
Scale :- As Shown
Sheet size: A2

Project	Consultancy Service for Preparation for DPR for short length transitory 3 lane bi-directional vehicular underpass connecting Hebbal flyover junction to Veterinary college via GKVK premises.
Drawing Title	STANDARD DRAWING TYPICAL DETAIL OF CAUTIONARY WARNING SIGNS
Drawing No.	RC/1640/HO/HBT/TU/DWG/RS/01/R0

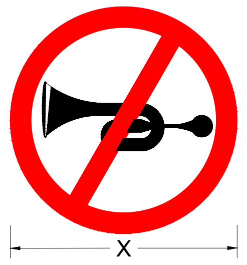
MANDATORY / REGULATORY SIGNS



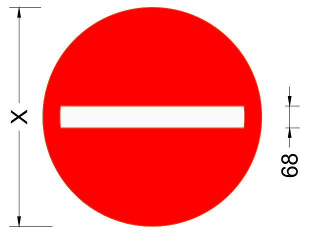
STOP
FIG 14.01



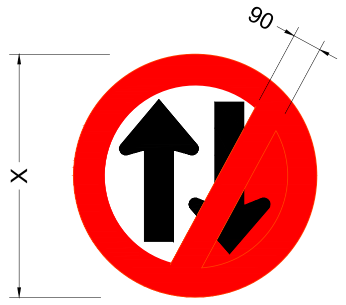
GIVE WAY
FIG 14.02



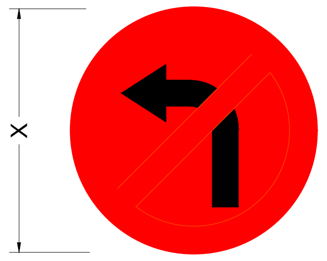
HORN PROHIBITED
FIG 14.19



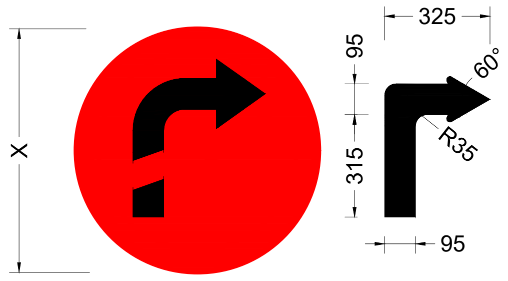
NO ENTRY
FIG 14.20



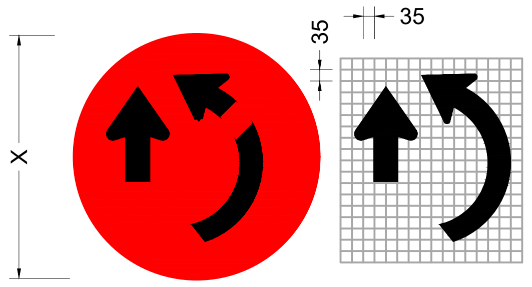
ONE WAY SIGN
FIG 14.21



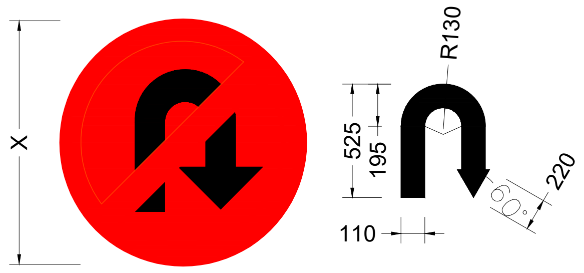
LEFT TURN PROHIBITED
FIG 14.22



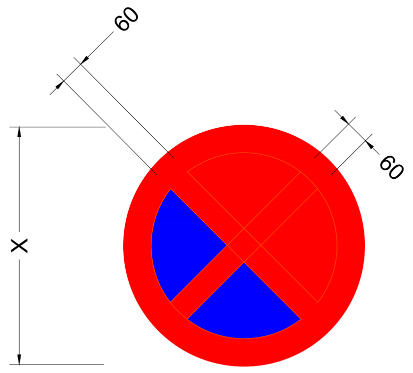
RIGHT TURN PROHIBITED
FIG 14.23



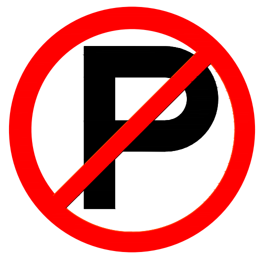
OVER TAKING PROHIBITED
FIG 14.24



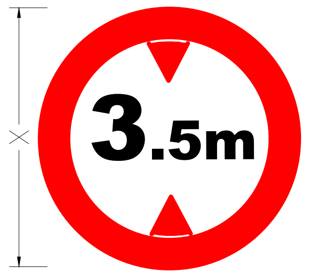
U-TURN PROHIBITED
FIG 14.25



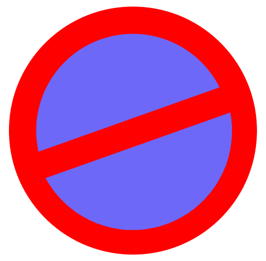
NO STANDING
FIG 14.30



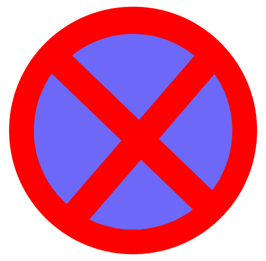
NO PARKING
FIG 14.31



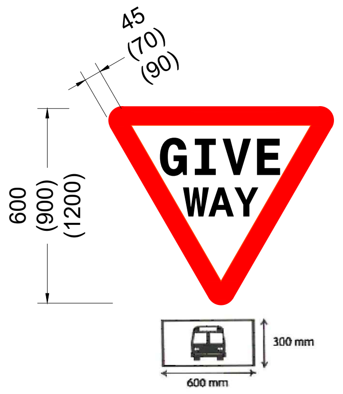
HEIGHT LIMIT
FIG 14.35



No Standing
FIG 14.29



No Stopping
FIG 14.29

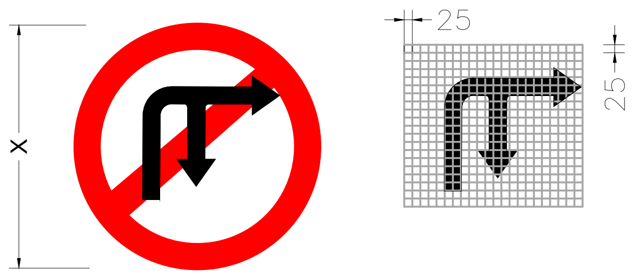


Give Way to buses Existing the Bus Bay
FIG 14.03

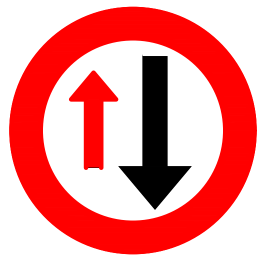
Note: For all SIGN BOARDS refer to PLATE- I & PLATE-I(CONTINUED) of IRC:67:2022.

DESIGN SPEED	SIZE	REGULATORY SIGNS	MANDATORY SIGNS			
		DIAMETER (mm) (X)	DIAMETER (mm) (X)	BORDER (mm)	OBLIQUE (mm)	FONT SIZE (mm)
UP TO 65kmph	IN CONJUNCTION WITH TRAFFIC LIGHT SIGNAL		300	35	35	75
	SMALL	600	600	50	50	100
66-80 kmph	MEDIUM	750	750	60	60	125
81-100 kmph	NORMAL	900	900	75	75	150

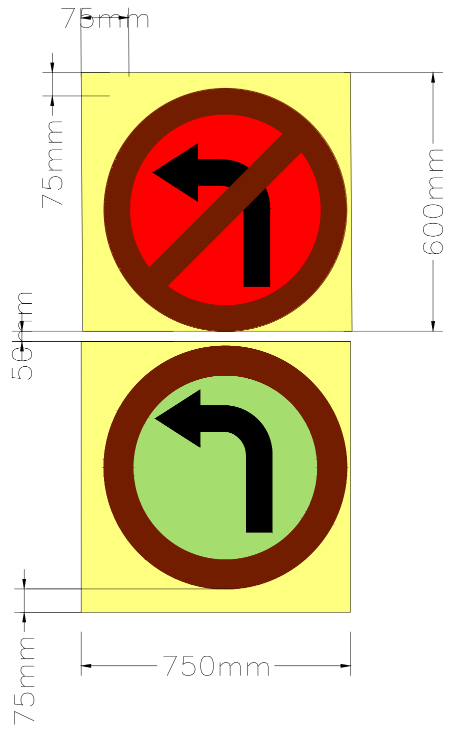
TABLE 14.4 OF IRC:67:2022
SIZE & DIMENSIONS OF MANDATORY / REGULATORY SIGNS



Right Turn & U-Trun Prohibited
FIG 14.26



Priority to Vehicles the Opposite Dirction
FIG 14.28



Free Left Turn Prohibited at Signal
FIG 14.27

NOTES:

1. ALL THE DIMENSIONS ARE IN MILLIMETERS UNLESS AND OTHERWISE SPECIFIED.
2. THE SIGN SHALL BE CIRCULAR SHAPE WITH RED BORDER, WHITE BACKGROUND, AND BLACK SYMBOL. REFER TO CL.14.7.1 OF IRC:67:2022.
3. FOR FURTHER DETAILS OF MANDATORY / REGULATORY SIGNS REFER TABLE.14.4 (PAGE.NO.29)OF IRC:67:2022.
4. SPECIFICATIONS OF THE REFLECTIVE SHEETING SHOULD BE OF CLASS B SHEETING: - HIGH INTENSITY PRISMATIC GRADE SHEETING AS PER ASTM-4956-04 TYPE IV,

REVISION	DATE	AMENDMENT \ ISSUE DESCRIPTION
R0	Sep.:- 2025	-

CLIENT
GOVERNMENT OF KARNATAKA
Bengaluru Smart Infrastructure Limited

AE/B-SMILE
AEE/B-SMILE
EE/B-SMILE
EIC-B-SMILE

CONSULTANT:
RODIC CONSULTANTS PVT. LTD.
1, JAI SINGH MARG (FIRST FLOOR), YMCA
CULTURAL CENTRE BUILDING
NEW DELHI - 110001 (INDIA)

REVISED FINAL DETAILED PROJECT REPORT

Designed:	RR	
Drawn:	SS	
Checked:	AT	
Approved:	HRY	

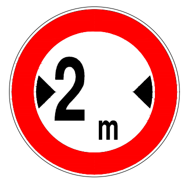
Scale :- As Shown
Sheet size: A2

Project: Consultancy Service for Preparation for DPR for short length transitory 3 lane bi-directional vehicular underpass connecting Hebbal flyover junction to Veterinary college via GKVK premises.

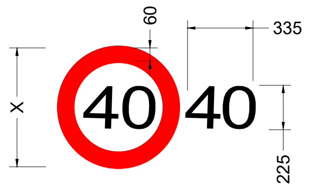
Drawing Title: STANDARD DRAWING
TYPICAL DETAIL OF MANDATORY / REGULATORY SIGNS

Drawing No.: RC/1640/HO/HBT/TU/DWG/RS/02/R0

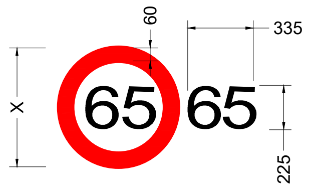
MANDATORY / REGULATORY SIGNS



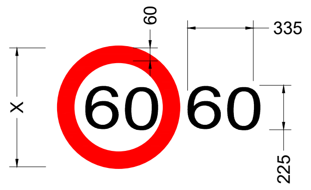
Width Limit
FIG 14.38



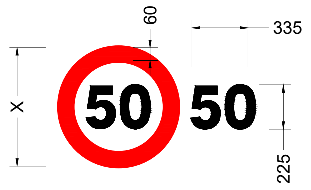
MAXIMUM SPEED LIMIT
FIG 14.39



MAXIMUM SPEED LIMIT
FIG 14.39



MAXIMUM SPEED LIMIT
FIG 14.39

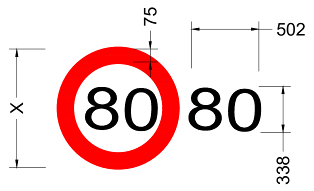


MAXIMUM SPEED LIMIT
FIG 14.39

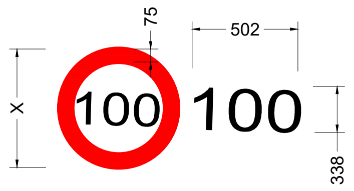
THE SIGN SHALL BE CIRCULAR SHAPE WITH RED BORDER, WHITE BACKGROUND, AND BLACK SYMBOL.

DESIGN SPEED	SIZE (X)	MAXIMUM DISTANCE (m) BETWEEN	
		CONSECUTIVE SIGNS FOR THE SAME SIDE OF CARRIAGEWAY	TERMINAL SIGN & FIRST REPEATER
BELOW 40kmph	600	300	200
50 kmph	600	400	200
60 kmph	600	500	250
80 kmph	900	700	350

TABLE 14.5 OF IRC:67:2022
PLACEMENT OF REPEATER SIGN



MAXIMUM SPEED LIMIT
(FOR 80 kmph & ABOVE)
FIG 14.39

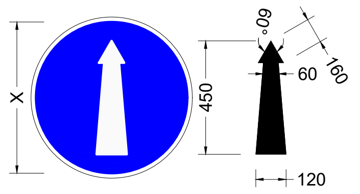


MAXIMUM SPEED LIMIT
(FOR 80 kmph & ABOVE)
FIG 14.39

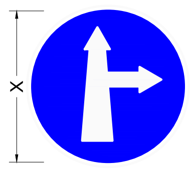
COMPULSORY DIRECTION CONTROL & OTHER SIGN

DESIGN SPEED	SIZE	REGULATORY SIGNS	MANDATORY SIGNS			
		DIAMETER (mm) (X)	DIAMETER (mm) (X)	BORDER (mm)	OBLIQUE (mm)	FONT SIZE (mm)
UP TO 65kmph	IN CONJUNCTION WITH TRAFFIC LIGHT SIGNAL		300	35	35	75
	SMALL	600	600	50	50	100
66-80 kmph	MEDIUM	750	750	60	60	125
81-100 kmph	NORMAL	900	900	75	75	150

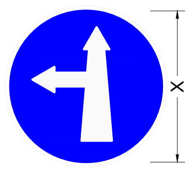
TABLE 14.4 OF IRC:67:2022
SIZE & DIMENSIONS OF MANDATORY / REGULATORY SIGNS



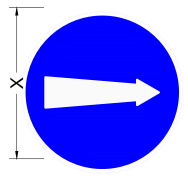
Compulsory Ahed
FIG 14.43



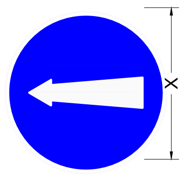
Compulsory Ahead
Or Turn Right
FIG 14.44



Compulsory Ahead
Or Turn Left
FIG 14.45



Compulsory Turn Right
FIG 14.46



Compulsory Turn Left
FIG 14.47

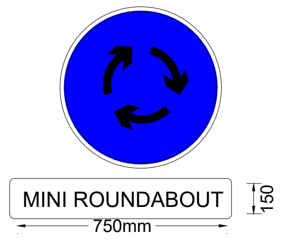


FIG 14.47a
Priority To Vehicles From Right

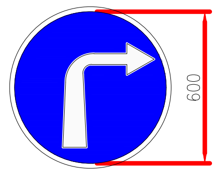


Fig. 14.48
Compulsory Keep Right
(In advance of Junction)

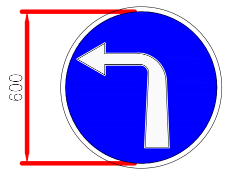
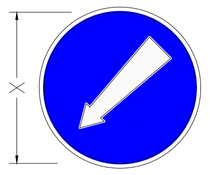
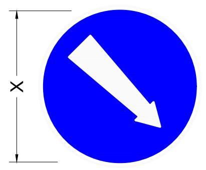


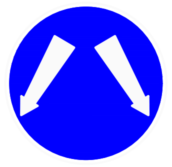
Fig. 14.49
Compulsory Keep Left
(In advance of Junction)



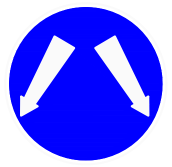
Compulsory
Keep Left
FIG 14.50



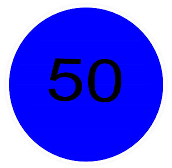
Compulsory
Keep Right
FIG 14.51



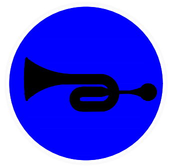
Pass Either Side
FIG 14.52



Minimum Speed Limit
FIG 14.53



Minimum Speed Limit
FIG 14.53



Compulsory Sound Horn
FIG 14.59

THE SIGN SHALL BE CIRCULAR SHAPE WITH BLUE BACKGROUND AND WHITE BORDER (2mm), AND HAVING SYMBOL IN WHITE.

NOTES:

1. ALL THE DIMENSIONS ARE IN MILLIMETERS UNLESS AND OTHERWISE SPECIFIED.
2. FOR FURTHER DETAILS OF MAXIMUM SPEED LIMIT REFER TABLE.14.4 (PAGE.NO.34) OF IRC:67:2022.
3. FOR FURTHER DETAILS OF MANDATORY / REGULATORY SIGNS REFER TABLE.14.4 (PAGE.NO.29)OF IRC:67:2022.
4. FOUNDATION CONC SHALL BE OF M25, ALL PLATES, ANGLE SHALL OF MS WITH FY = 250 MPA . NUTS , BOLTS , IF ANY, SHALL BE OF HIGH STRENGTH BOLTS AS PER IS:1364 & IS:1367. THREE (3) MM THICK ALUMINUM COMPOSITE MATERIAL (ACM) AS PER SPECIFICATION IN TABLE - 6.1 , IRC:67 - 2022 .
5. SPECIFICATIONS OF THE REFLECTIVE SHEETING SHOULD BE OF CLASS B SHEETING: - HIGH INTENSITY PRISMATIC GRADE SHEETING AS PER ASTM-4956-04 TYPE IV,

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NEW DELHI - 110001 (INDIA)

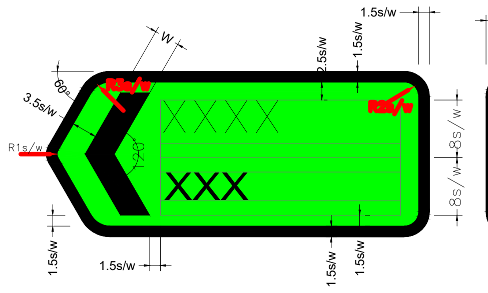
REVISED FINAL DETAILED PROJECT REPORT

Designed:	RR	
Drawn:	SS	
Checked:	AT	
Approved:	HRY	

Scale :- As Shown
Sheet size: A2

Project	Consultancy Service for Preparation for DPR for short length transitory 3 lane bi-directional vehicular underpass connecting Hebbal flyover junction to Veterinary college via GKVK premises.
Drawing Title	STANDARD DRAWING MANDATORY / REGULATORY SIGNS
Drawing No.	RC/1640/HO/HBT/TU/DWG/RS/03/R0

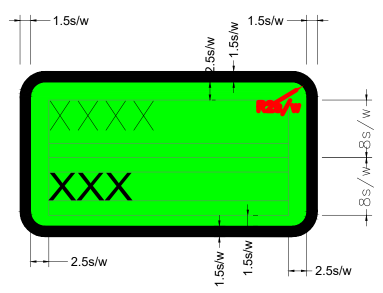
INFORMATORY SIGNS


XXXX
XXX
W
60°
3.5s/w
R5s/w
1.5s/w
2.5s/w

FLAG TYPE DIRECTION SIGN

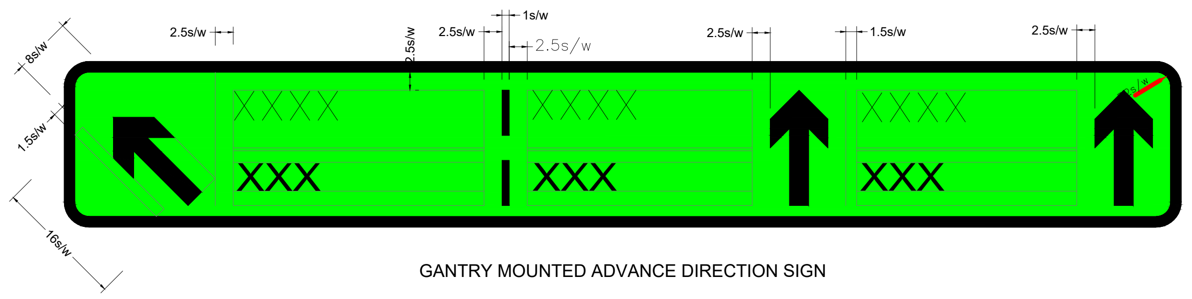
FIG 16.04

Width of Chevron (W)
1 Line of Text=3.5s/w
2 Line of Text=4s/w
3 Line of Text=4.5s/w
4 Line of Text=5s/w


XXXX
XXX
1.5s/w
2.5s/w
8s/w

PLACE IDENTIFICATION SIGN

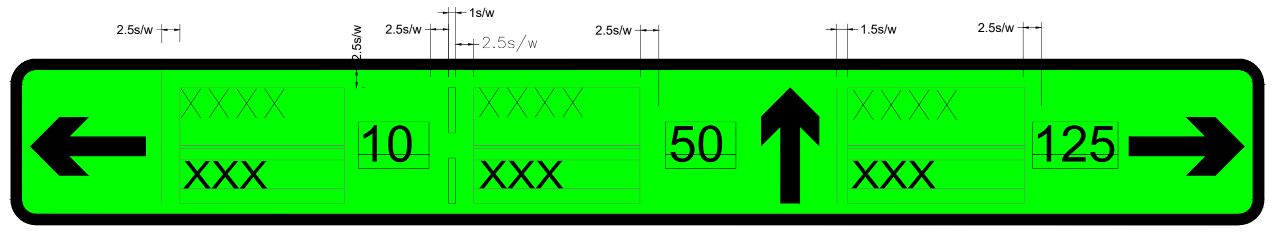
FIG 16.06


XXXX
XXX
2.5s/w
1s/w
8s/w
1.5s/w

GANTRY MOUNTED ADVANCE DIRECTION SIGN

AHEAD OF A GRADE SEPARATED JUNCTION

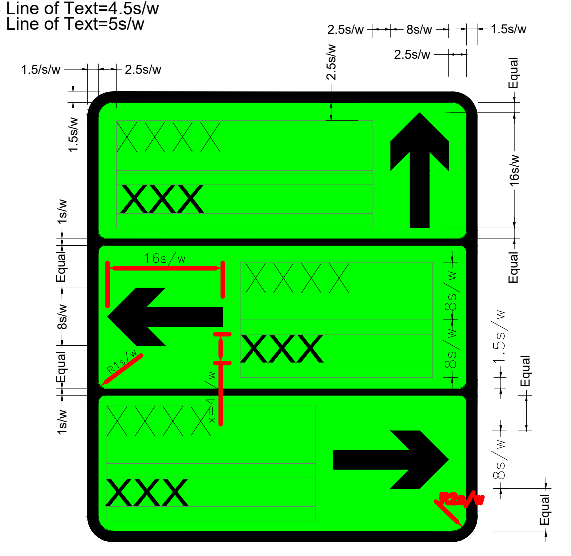
FIG 16.10


XXXX
XXX
10
50
125
2.5s/w
1s/w
1.5s/w

Gantry Mounted Advance Direction

Ahead of At - Grade Junction

FIG 16.11

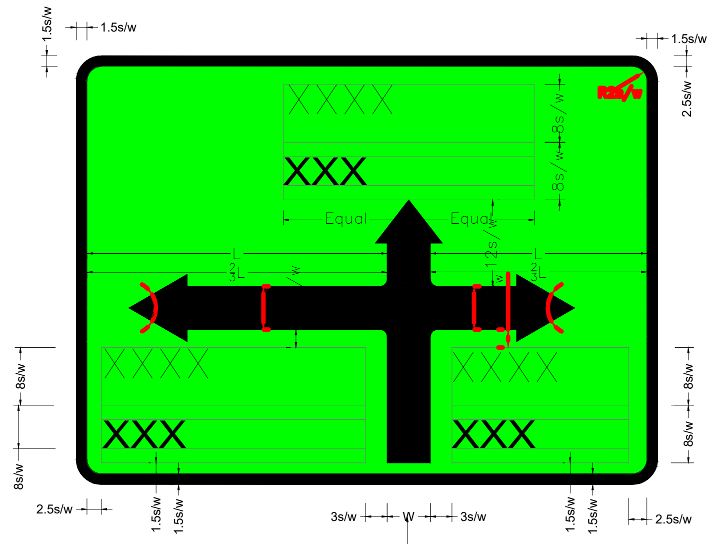

XXXX
XXX
2.5s/w
8s/w
1.5s/w
16s/w
Equal
4s/w

i.e. 1s/w=1/4 of lowercase "x" height

STACK TYPE ADVANCE DIRECTION

(SHOULDER MOUNTED)

FIG 16.01

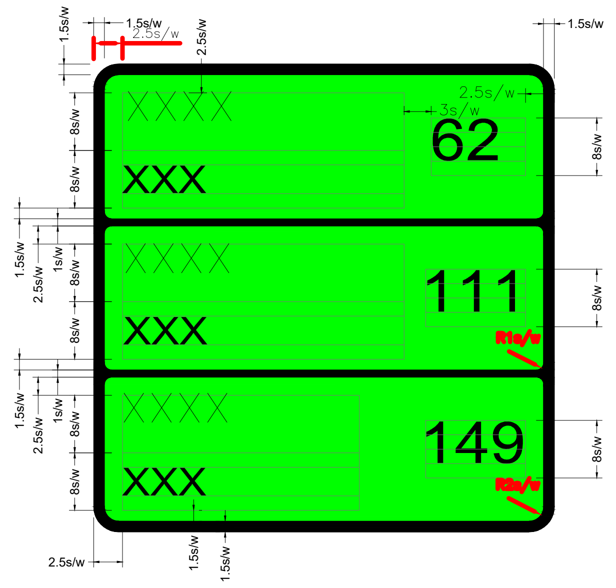

XXXX
XXX
Equal
8s/w
1.5s/w
2.5s/w
3s/w
W

i.e. 1s/w=1/4 of lowercase "x" height

Width of Route Symbol (W)
6s/w for NH/SH/Urban Roads

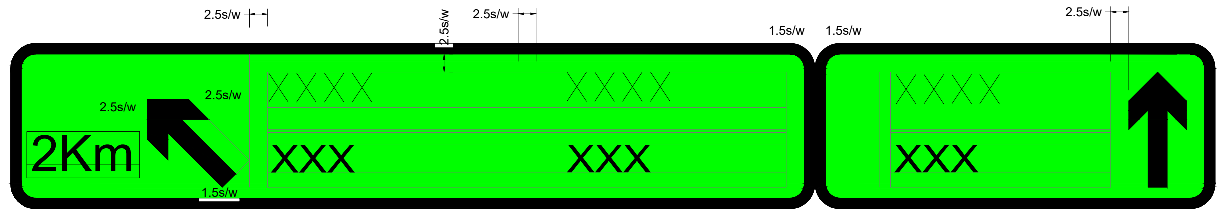
MAP TYPE ADVANCE DIRECTION
(SHOULDER MOUNTED)

FIG 16.02


XXXX
XXX
62
111
149
1.5s/w
2.5s/w
8s/w
R5s/w

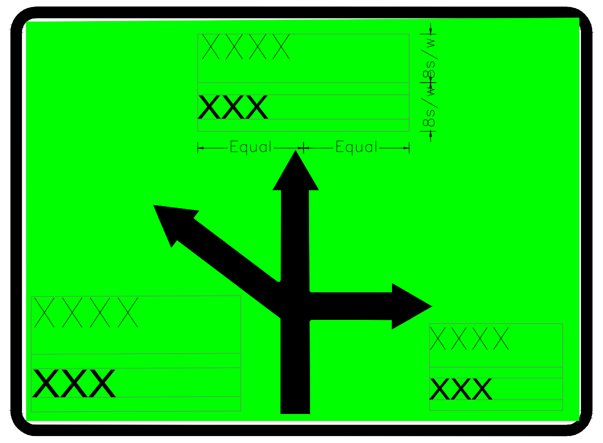
RE ASSURANCE SIGN

FIG 16.05


2Km
XXXX
XXX
2.5s/w
1.5s/w

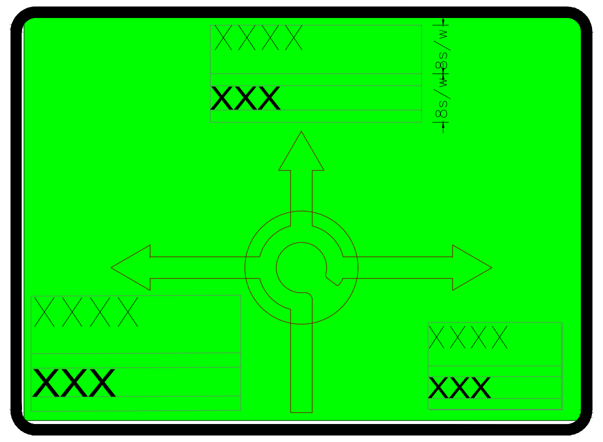
Advance Direction Signs for an Interchange

FIG 16.12


XXXX
XXX
Equal

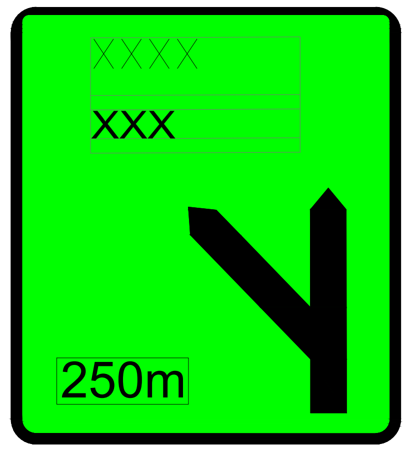
MAP TYPE ADVANCE DIRECTION
(SHOULDER MOUNTED)

FIG 16.02



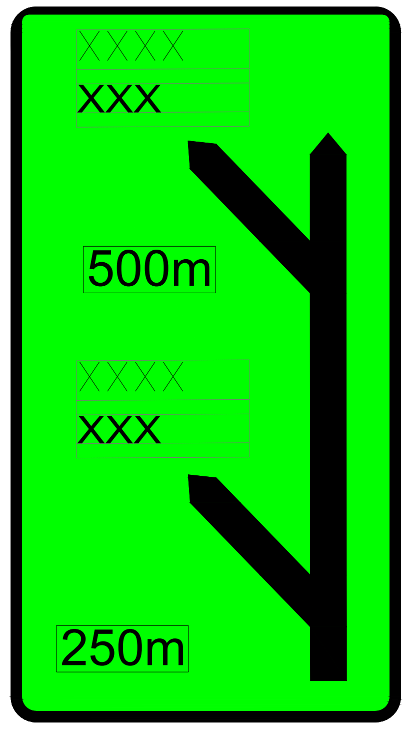
MAP TYPE ADVANCE DIRECTION
on Roundabout

FIG 16.03


XXXX
XXX
250m

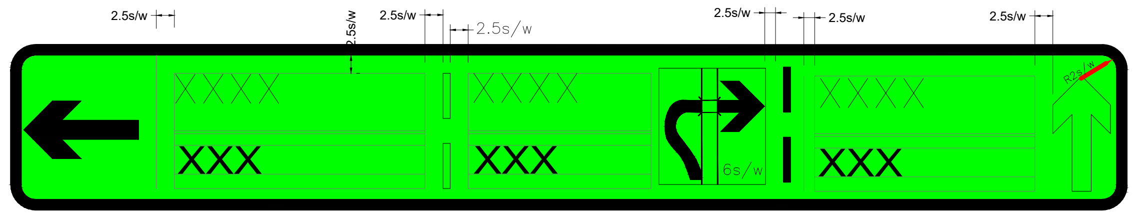
Shoulder Mounted Sign in Advance of Grade Separated Junction

FIG 16.14a


XXXX
XXX
500m
250m

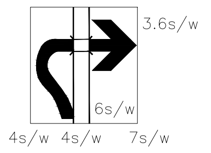
Shoulder Mounted Sign in Advance of an Interchange

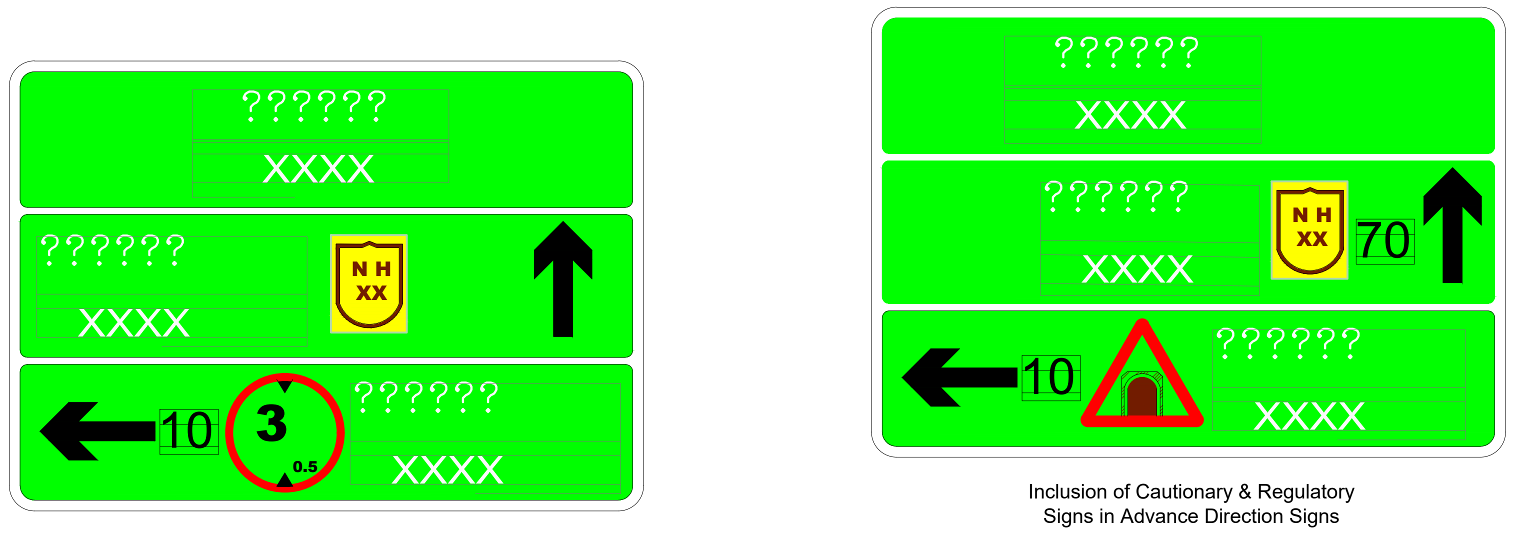
FIG 16.14b


XXXX
XXX
2.5s/w
6s/w

Gantry Mounted Advance Direction Sign
Ahead of Flyover in Urban/City Roads

FIG 16.12


3.6s/w
6s/w
4s/w
4s/w
7s/w


??????
XXXX
N H
XX
70
10
3
0.5

Inclusion of Cautionary & Regulatory
Signs in Advance Direction Signs

FIG 16.01a

NOTES:

1. ALL THE DIMENSIONS ARE IN MILLIMETERS UNLESS AND OTHERWISE SPECIFIED.
2. FOR FURTHER DETAILS OF DRAWING REFER IRC: 67-2022 OR MoRTH DRAWING.
3. FOR COLOR PATTERN OF INFORMATORY SIGNS BACKGROUND COLOR OF THE SIGN SHALL BE GREEN & ARROW/BORDER / LETTERS SHALL BE WHITE.
4. FOR DIMENSIONS REFER TABLE NO.11.1 & ANNEXURE-III OF IRC: 67-2022 OR SHOWN IN NEXT
5. SPECIFICATIONS OF THE REFLECTIVE SHEETING SHOULD BE OF CLASS B SHEETING: - HIGH PRISMATIC GRADE SHEETING AS PER ASTM-4956-04 TYPE IV,

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NEW DELHI - 110001 (INDIA)

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Designed:	RR
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Scale :- As Shown
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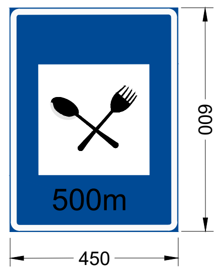
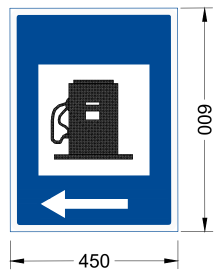
Project: Consultancy Service for Preparation for DPR for short length transitory 3 lane bi-directional vehicular underpass connecting Hebbal flyover junction to Veterinary college via GKVK premises.

Drawing Title: STANDARD DRAWING
TYPICAL DETAIL OF INFORMATORY SIGNS

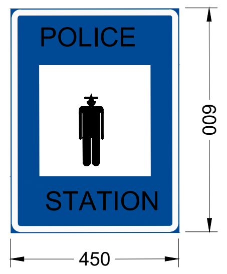
Drawing No. RC/1640/HO/HBT/TU/DWG/RS/04/R0


500m
600
450

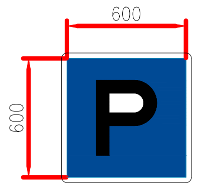
EATING PLACE
Fig: 17.01



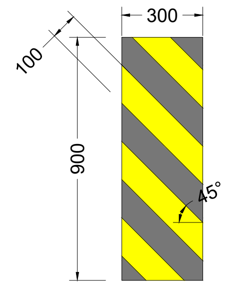
FILLING STATION
Fig: 17.06


POLICE
STATION
600
450

POLICE STATION
Fig: 17.13

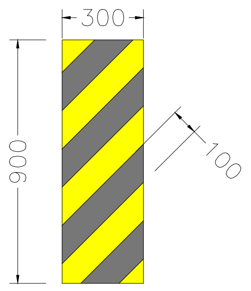


Parking
Fig: 18.01


300
100
900
45°

OBJECT HAZARD (LEFT)

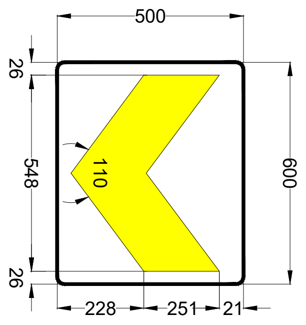
FIG 15.78



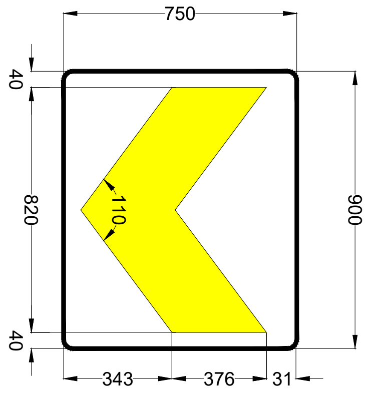
OBJECT HAZARD (RIGHT)

FIG 15.79

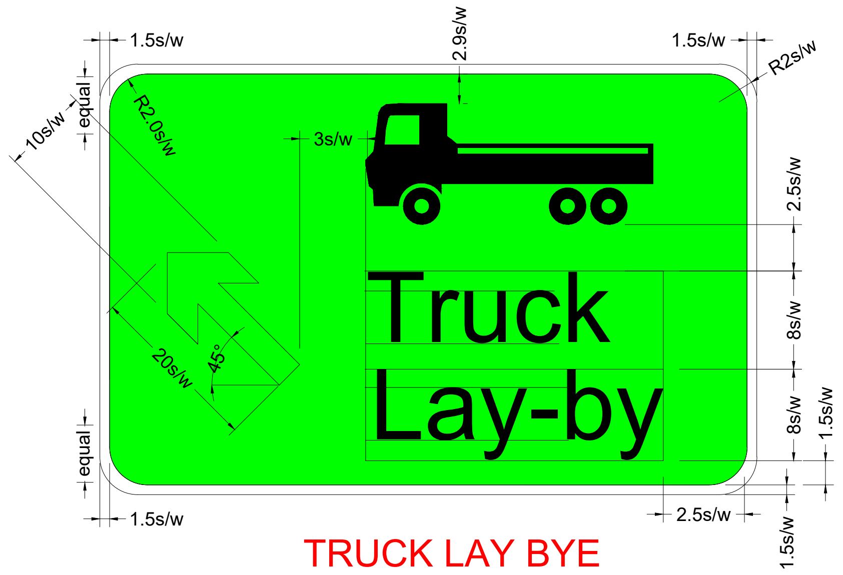
OBJECT HAZARD LEFT & RIGHT ARE PLACED ON ALL BRIDGES, CULVERTS, ROB, START POINT OF MBCB, SHARP CURVE < 450 & CURVE RADII 1200M WITH DEFLECTION ANGLE <20,


500
26
548
26
110
600
228
251
21

Single Chevron (normal)
(Fig.15.74 , IRC:67:2022)

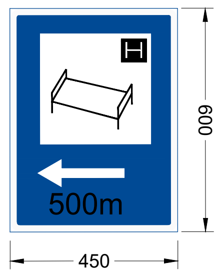

750
40
820
40
110
900
343
376
31

Single Chevron (>100kmph Speed)
(Fig.15.74 , IRC:67:2022)

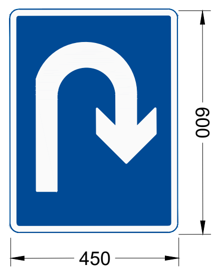

1.5s/w
2.9s/w
1.5s/w
R2s/w
10s/w
equal
R2.0s/w
3s/w
Truck
Lay-by
20s/w
45°
2.5s/w
8s/w
8s/w
1.5s/w
equal
1.5s/w
2.5s/w
1.5s/w

TRUCK LAY BYE

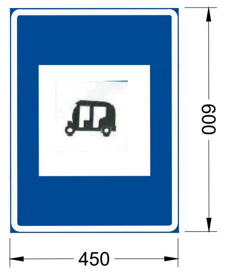
FIG 16.07


H
500m
600
450

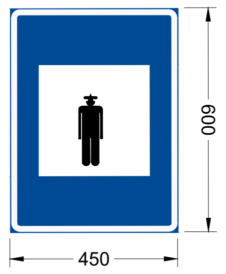
HOSPITAL
Fig: 17.07



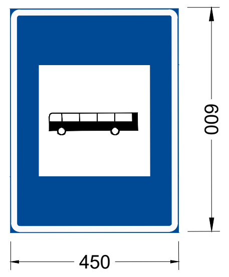
U-TURN AHEAD
Fig: 17.09



Auto- Rickshaws Stand
Fig: 17.19



POLICE STATION
Fig: 17.13 (IRC: 67.2012)



BUS STOP
Fig: 17.35 (IRC: 67.2012)

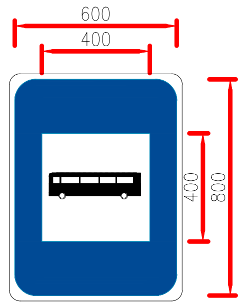
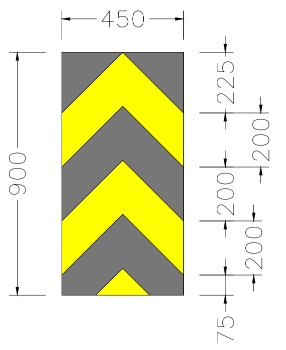
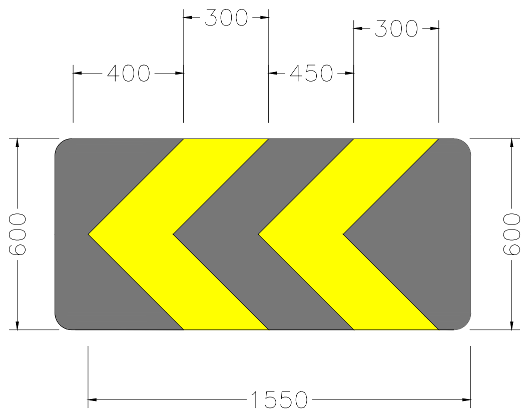

600
400
400
800

Fig - 17.35
Bus Stop

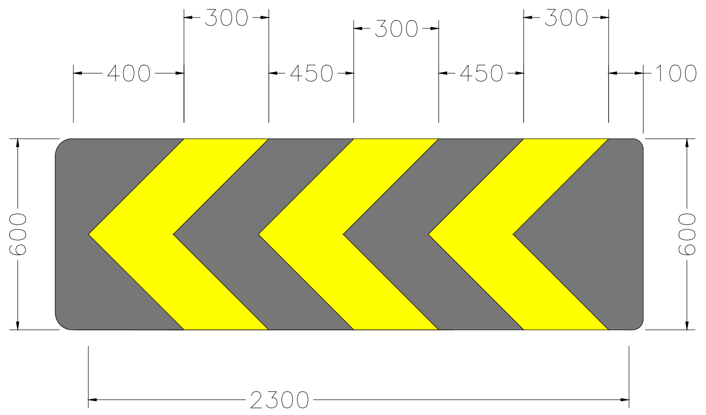

450
900
225
200
200
200
75

TWO WAY HAZARD MARKER

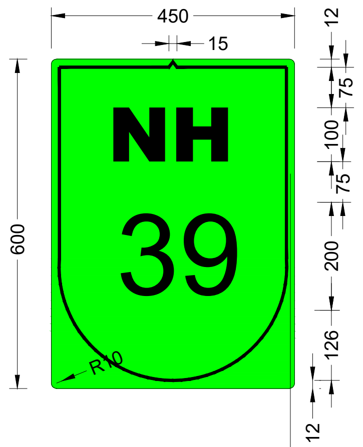
FIG 15.80


300
300
400
450
600
600
1550

Double Chevron
(Fig.15.74)


300
300
300
400
450
450
100
600
600
2300

Triple Chevron
(Fig.15.77)


450
15
12
NH
39
75
100
75
200
126
12
600
R10

NH ROUTE MARKER SIGN
Fig: 22.02 (IRC: 67.2022)

Table-11.1 Letter size & Sitting of Information Signs (Shoulder & Gantry Mounted)											
	Advance Direction Signs (Shoulder Mounted)					Flag Type Direction Signs Reassurance Signs Place Identification Signs			Gantry Mounted Signs		
Design Speed	"X" Height (mm) Lower case	"X" Height (mm) Upper case	Minimum Clear Visibility to the Sign (m)	One Sign: Distance from junction (m)	Two Sign: Distance B/w 1st & 2nd Sign (m)	"X" Height (mm) Lower case	"X" Height (mm) Upper case	Minimum Clear Visibility to the Sign (m)	"X" Height (mm) Lower case	"X" Height (mm) Upper case	Minimum Clear Visibility to the Sign (m)
31-50 kmph	100 (75)*	140 (105)	75 (45)	45	45	75 (60)	105 (84)	45 (35)	200 (175)	280 (245)	150
51-65 kmph	125 (100)	175 (140)	100 (60)	90	50	100 (75)	140 (105)	60 (45)			
66-80 kmph	150 (125)	210 (175)	135	90-150	70	125 (100)	175 (140)	75 (60)			
81-100 kmph	200 (150)	280 (210)	165	150-225	100	150 (125)	210 (175)	105 (75)	250 (200)	350 (280)	200
	Note :The Value in Brackets are the minimum values to be adopted when there are site/space constraints.										

TABLE 12.1 OF IRC:67:2022

NOTES:

1. ALL THE DIMENSIONS ARE IN MILLIMETERS UNLESS AND OTHERWISE SPECIFIED.
2. FOR FURTHER DETAILS OF DRAWING REFER IRC: 67-2022 OR MoRTH DRAWING.
3. FOR FACILITY INFORMATION SIGN SHALL BE RECTANGULAR AND HAVE BLUE BACKGROUND WHILE BLACK SYMBOL SHALL BE DISPLAYED IN WHITE SQUARE TO INDICATE THE FACILITY.
4. FOR COLOR PATTERN OF INFORMATORY SIGNS BACKGROUND COLOR OF THE SIGN SHALL BE GREEN & ARROW/BORDER / LETTERS SHALL BE WHITE.
5. FOR FACILITY INFORMATION SIGN SIZE OF SMALL SIZED SIGN SHALL BE 600mm X 450mm. FOR MORE DETAIL REFER.17.1 OF IRC:67:2022.
6. FOR COLOR PATTERN OF INFORMATORY SIGNS REFER TABLE NO.8.3 OF IRC: 67-2012 .
7. FOR DIMENSIONS REFER TABLE NO.11.1 & ANNEXURE-III OF IRC: 67-2022 OR MoRTH DRAWING.
8. SPECIFICATIONS OF THE REFLECTIVE SHEETING SHOULD BE OF CLASS B SHEETING: - HIGH INTENSITY MICRO PRISMATIC GRADE SHEETING AS PER ASTM-4956-04 TYPE IV,

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EIC-B-SMILE

CONSULTANT:
RODIC CONSULTANTS PVT. LTD.
1, JAI SINGH MARG (FIRST FLOOR), YMCA
CULTURAL CENTRE BUILDING
NEW DELHI - 110001 (INDIA)

REVISED FINAL DETAILED PROJECT REPORT

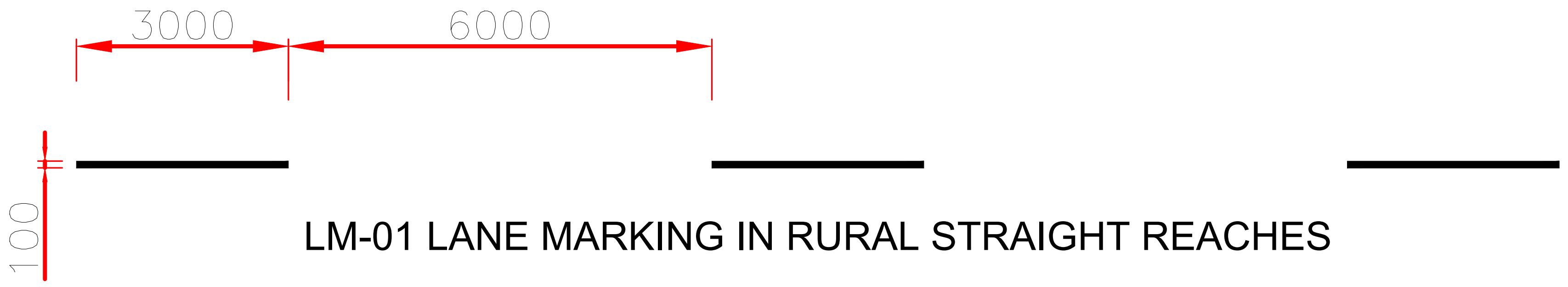
Designed:	RR	
Drawn:	SS	
Checked:	AT	
Approved:	HRY	

Scale :- As Shown
Sheet size: A2

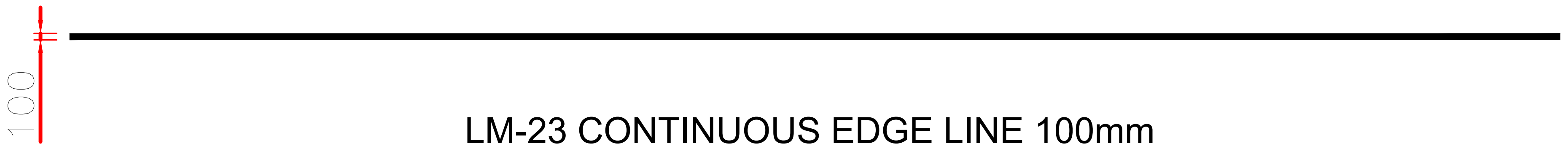
Project: Consultancy Service for Preparation for DPR for short length transitory 3 lane bi-directional vehicular underpass connecting Hebbal flyover junction to Veterinary college via GKVK premises.

Drawing Title: STANDARD DRAWING
TYPICAL DETAIL OF INFORMATORY SIGNS

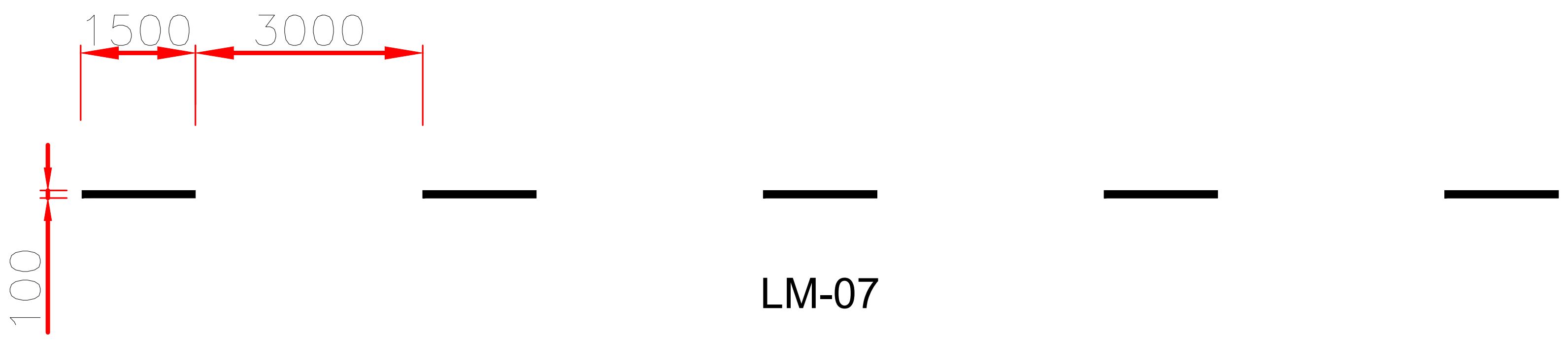
Drawing No.: RC/1640/HO/HBT/TU/DWG/RS/04/R0



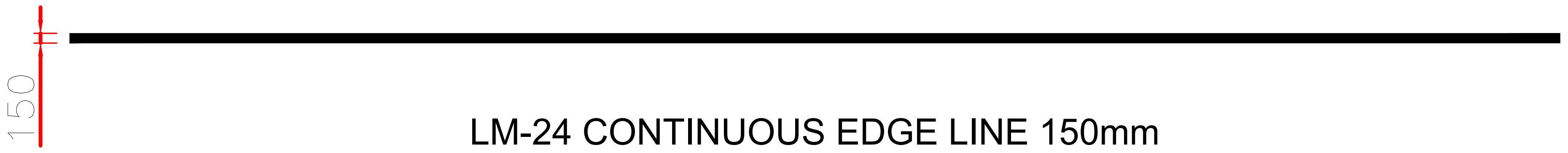
LM-01 LANE MARKING IN RURAL STRAIGHT REACHES



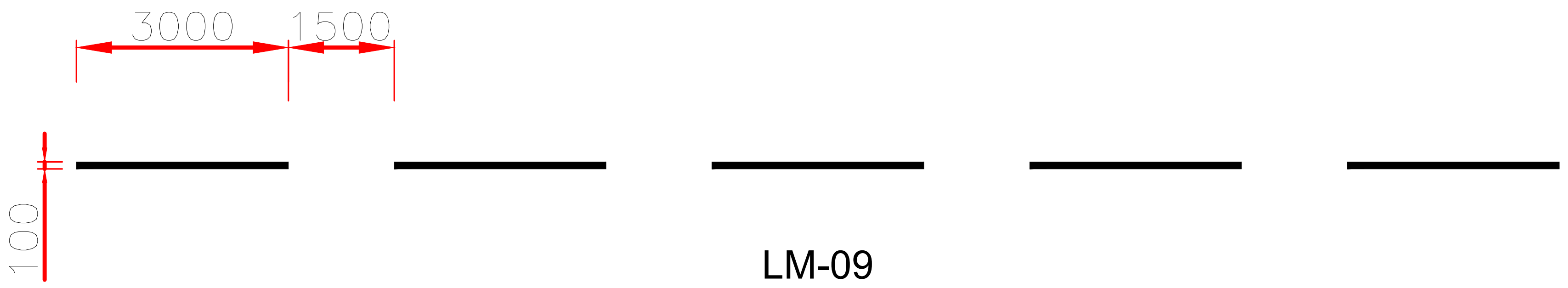
LM-23 CONTINUOUS EDGE LINE 100mm



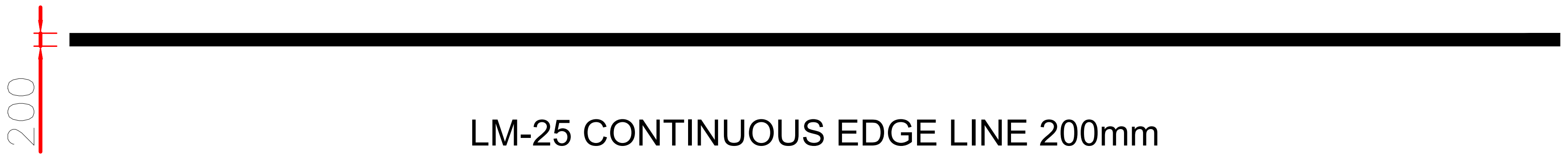
LM-07



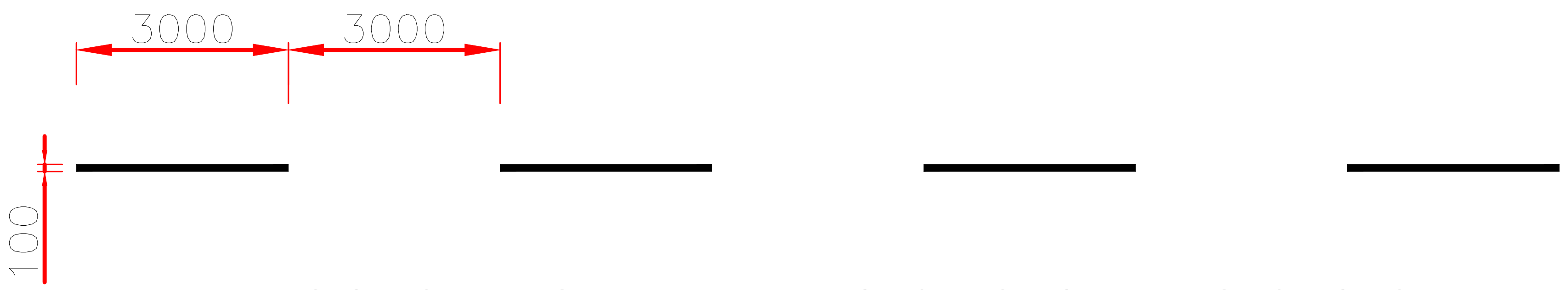
LM-24 CONTINUOUS EDGE LINE 150mm



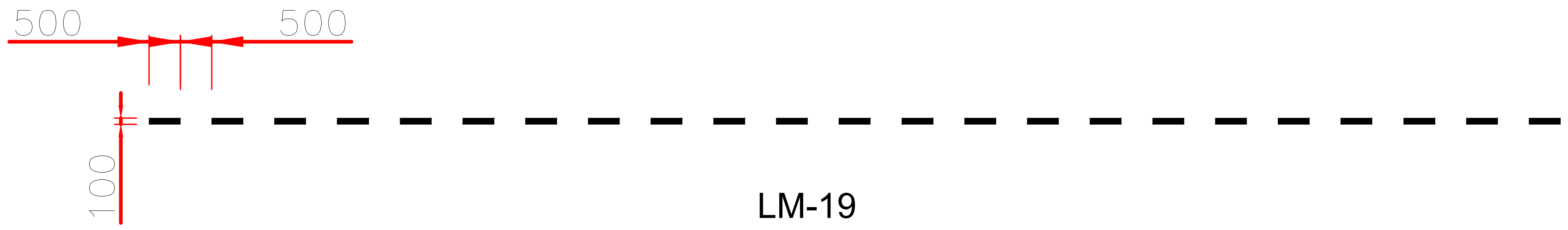
LM-09



LM-25 CONTINUOUS EDGE LINE 200mm



LM-11 LANE MARKING ON CURVES AND AT APPROACHES TO INTERSECTIONS IN RURAL AREA



LM-19

NOTES:

1. ALL DIMENSIONS ARE IN METRES UNLESS SPECIFIED.
2. MARKING SHALL BE CONSTRUCTED AS PER IRC : 35–2015

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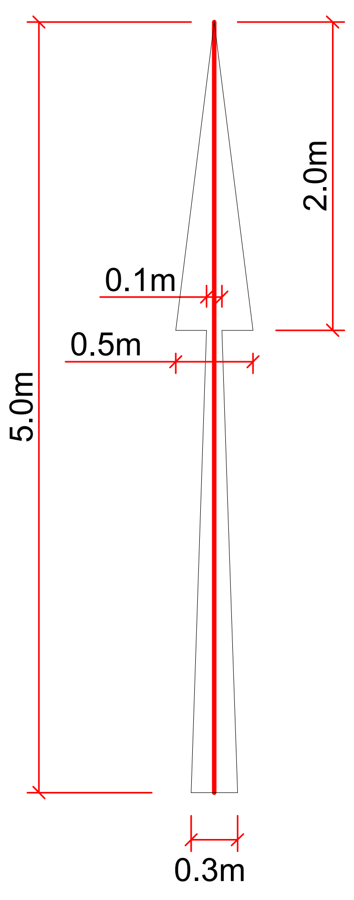
Sheet size: A2

Project: Consultancy Service for Preparation for DPR for short length transitory 3 lane bi-directional vehicular underpass connecting Hebbal flyover junction to Veterinary college via GKVK premises.

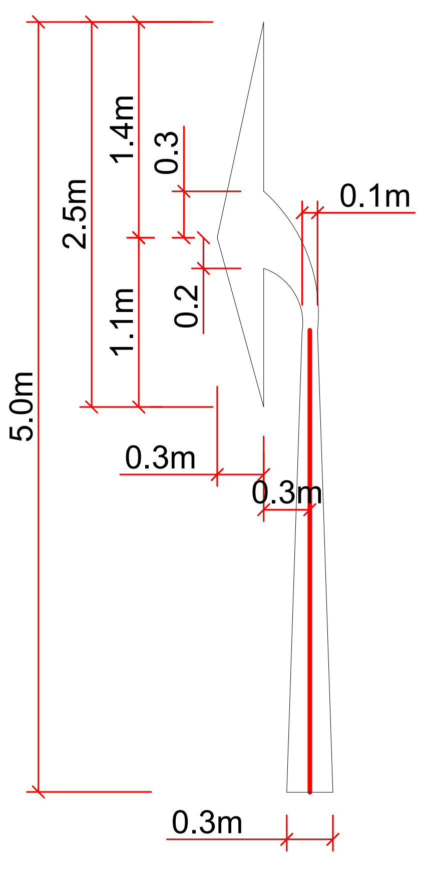
Drawing Title: STANDARD DRAWING
TYPICAL DETAIL OF LANE MARKING

Drawing No. RC/1640/HO/HBT/TU/DWG/RM/01/R0



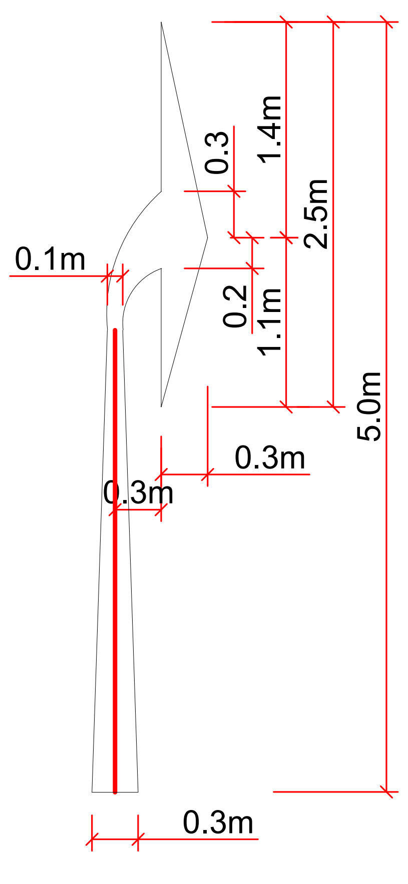
2.0m
0.1m
0.5m
5.0m
0.3m

AM 08



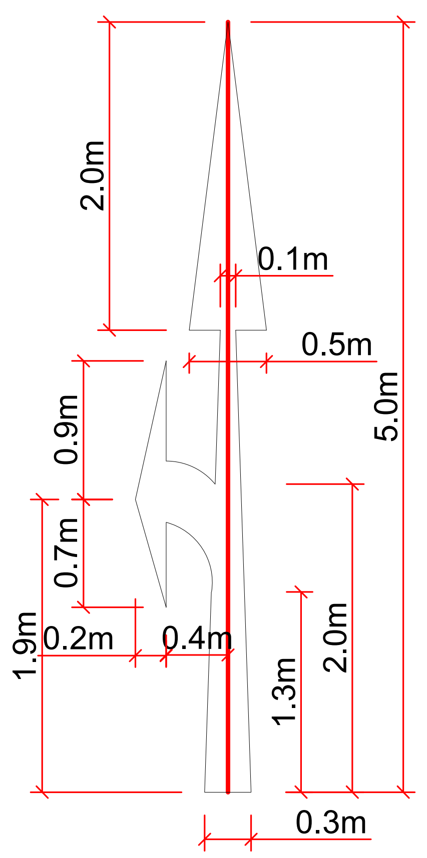
1.4m
0.3
2.5m
0.1m
0.2
1.1m
5.0m
0.3m
0.3m
0.3m

AM 09



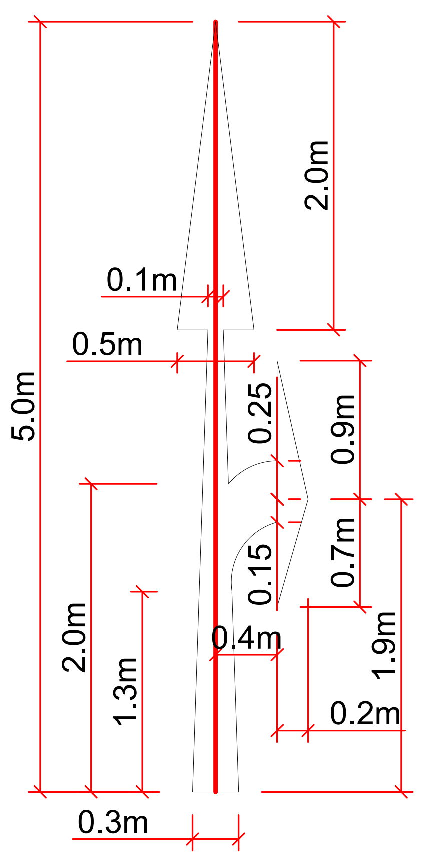
0.3
1.4m
2.5m
0.1m
0.2
1.1m
5.0m
0.3m
0.3m
0.3m

AM 10



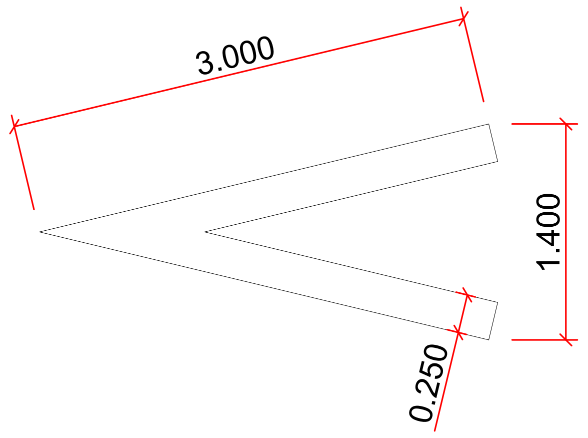
2.0m
0.1m
0.5m
5.0m
0.9m
0.7m
1.9m
0.2m
0.4m
2.0m
1.3m
0.3m

AM 11



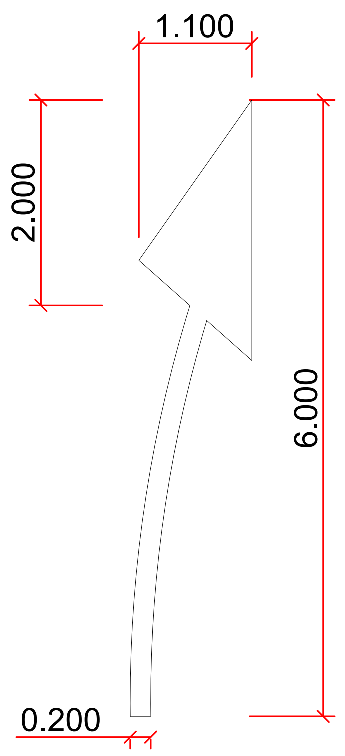
2.0m
0.1m
0.5m
5.0m
0.25
0.9m
0.15
0.7m
2.0m
1.3m
0.4m
1.9m
0.2m
0.3m

AM 12



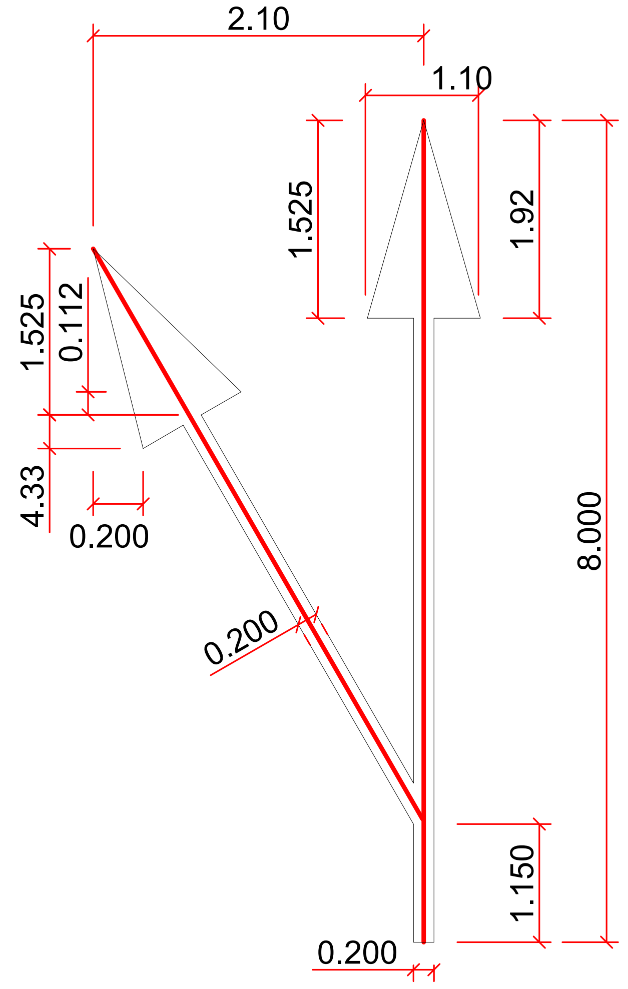
3.000
1.400
0.250

AM 13



1.100
2.000
6.000
0.200

AM 18



2.10
1.10
1.525
1.92
1.525
0.112
4.33
0.200
0.200
8.000
1.150
0.200

AM 20

ARROW MARKING FOR ROUTE DIRECTION

NOTES:

1. ALL DIMENSIONS ARE IN METRES UNLESS SPECIFIED.
2. MARKING SHALL BE CONSTRUCTED AS PER IRC

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Drawing Title: STANDARD DRAWING
TYPICAL DETAIL OF ARROW MARKINGS

Drawing No.: RC/1640/HO/HBT/TU/DWG/RM/02/R0

Table 1: Longitudinal Markings (LM)

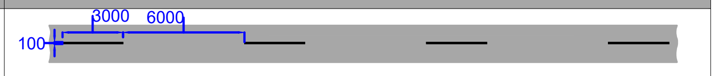
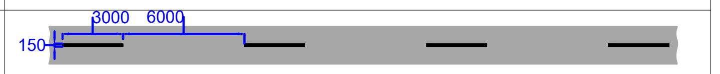
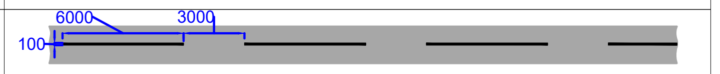
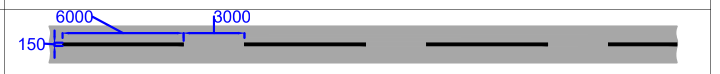
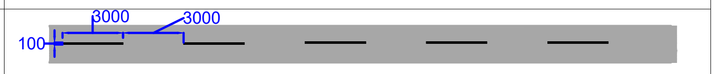
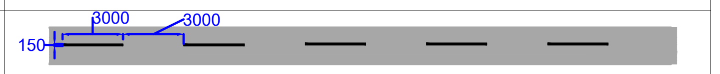
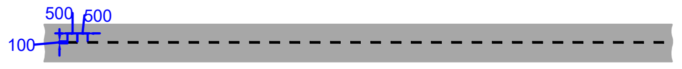
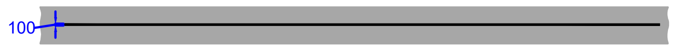
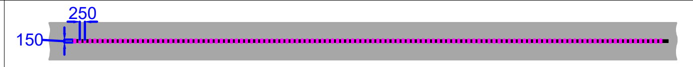
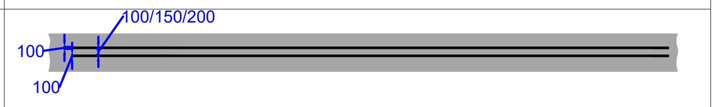
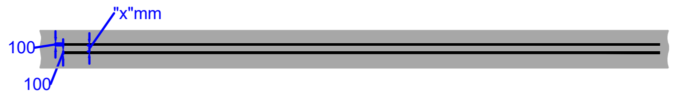
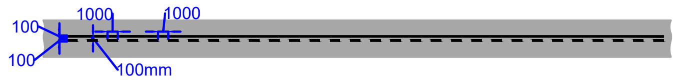
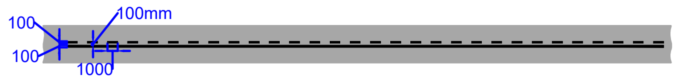
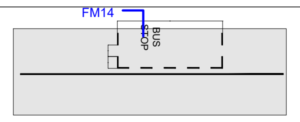
Marking Abbreviation	Type	Length of Line Segment (mm)	Length of Gap (mm)	Width (mm)	Colour	Pattern
LM01	Broken	3000	6000	100	White	
LM02	Broken	3000	6000	150	White	
LM04	Broken	6000	3000	100	White	
LM05	Broken	6000	3000	150	White	
LM11	Broken	3000	3000	100	White	
LM12	Broken	3000	3000	150	White	
LM19	Broken	500	500	100	White	
LM23	Continuous	NA	NA	100	White	
LM24	Continuous Solid Raised Profile	NA	NA	150	White	
LM26	Continuous (Two Lines)	Two Solid Lines separated by 100/150/200 mm		Each Solid Line of 100mm	White	
LM27	Continuous (Two Lines)	Two Solid Lines separated by "x"mm apart, "x" > 200mm		Each Solid Line of 100mm	White	
LM28	Continuous & Broken	Continuous & Broken separated by 100mm		Each Line of 100mm	White	
LM29	Continuous & Broken	Continuous & Broken separated by 100mm		Each Line of 100mm	White	
FM14	Word Message "BUS STOP"	NA		1250	White	

Table 4: Hazard Markings (HM)

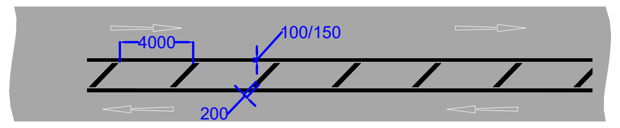
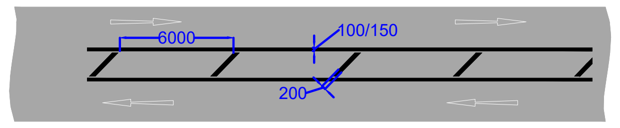
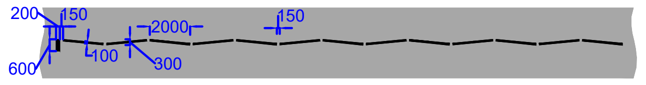
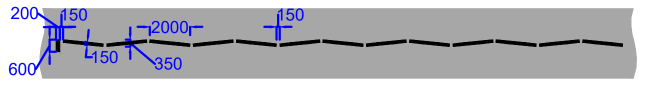
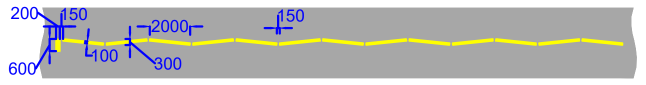
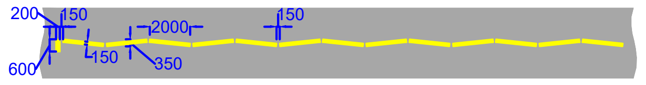
Marking Abbreviation	Type	Width(mm)		Space (mm)	Colour	Pattern
		Longitudinal	Diagonal / Chevron			
HM10	Ladder Hatching	100/150	200	4000	White	
HM11	Ladder Hatching	100/150	200	6000	White	
HM21	ZIG-ZAG (Hazard)	100	NA	NA	White	
HM22	ZIG-ZAG (Hazard)	150	NA	NA	White	
HM23	ZIG-ZAG (Hazard)	100	NA	NA	Yellow	
HM24	ZIG-ZAG (Hazard)	150	NA	NA	Yellow	

Table 5: Transverse Markings (TM)

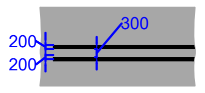
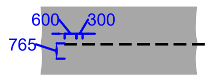
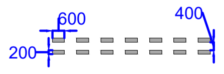
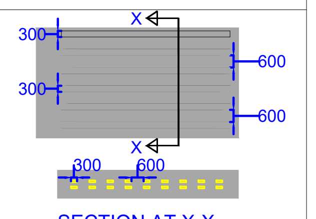
Marking Abbreviation	Type	Length of Line Segment (mm)	Length of Gap (mm)	Width (mm)	Colour	Pattern
TM03	Continuous (Two Lines separated by 300mm apart)	Two Solid Line		Each Solid Line of 200mm	White	
TM04	Broken	600	300	100	White	
TM07	Broken(Two lines separated by 300 mm apart)	600	300	Each Broken Lines of 200 mm	White	
TM08	Bar Marking (One Set)	Across Full Carrigeway	6 Strips of 300mm wide, 5mm high @ 600mm apart.		Yellow	 SECTION AT X-X

Table 2: Block Markings (BM)

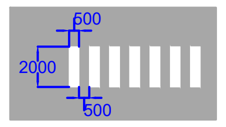
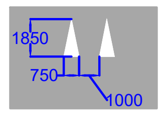
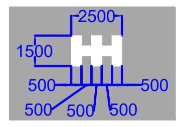
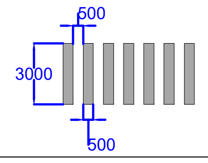
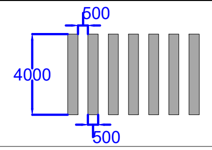
Marking Abbreviation	Type	Dimension (mm)		Gap in Between (mm)	Colour	Pattern
		Length	Breadth			
BM01	Rectangular Block	2000	500	500	White	
BM04	Triangular Block	750	1850	1000	White	
BM05	Chequer Block	500	500	500	White	
BM02	Rectangular Block	3000	500	500	White	
BM03	Rectangular Block	4000	500	500	White	

Table 6: Arrow Markings (AM)

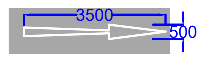
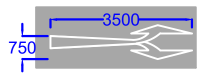
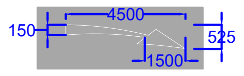
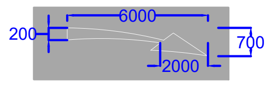
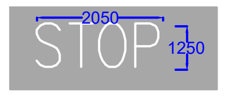
Marking Abbreviation	Type	Length (mm)	Width (mm)	Colour	Pattern
AM01	Straight Arrow	3500	500	White	
AM06	Right & Left Arrow	3500	750	White	
AM17	Deflection Arrow	4500	1500	White	
AM18	Deflection Arrow	6000	1500	White	

Table 3: Directional Markings (DM)

Marking Abbreviation	Type	Width (mm)	Height (mm)	Colour	Pattern
DM01	Direction Information "STOP"	2050	1250	White	

REVISION	DATE	AMENDMENT \ ISSUE DESCRIPTION
R0	Sep.:- 2025	-

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GOVERNMENT OF KARNATAKA

Bengaluru Smart Infrastructure Limited

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EIC-B-SMILE

CONSULTANT:

RODIC CONSULTANTS PVT. LTD.
1, JAI SINGH MARG (FIRST FLOOR), YMCA
CULTURAL CENTRE BUILDING
NEW DELHI - 110001 (INDIA)

REVISED FINAL DETAILED PROJECT REPORT

Designed:	RR	
Drawn:	SS	
Checked:	AT	
Approved:	HRY	

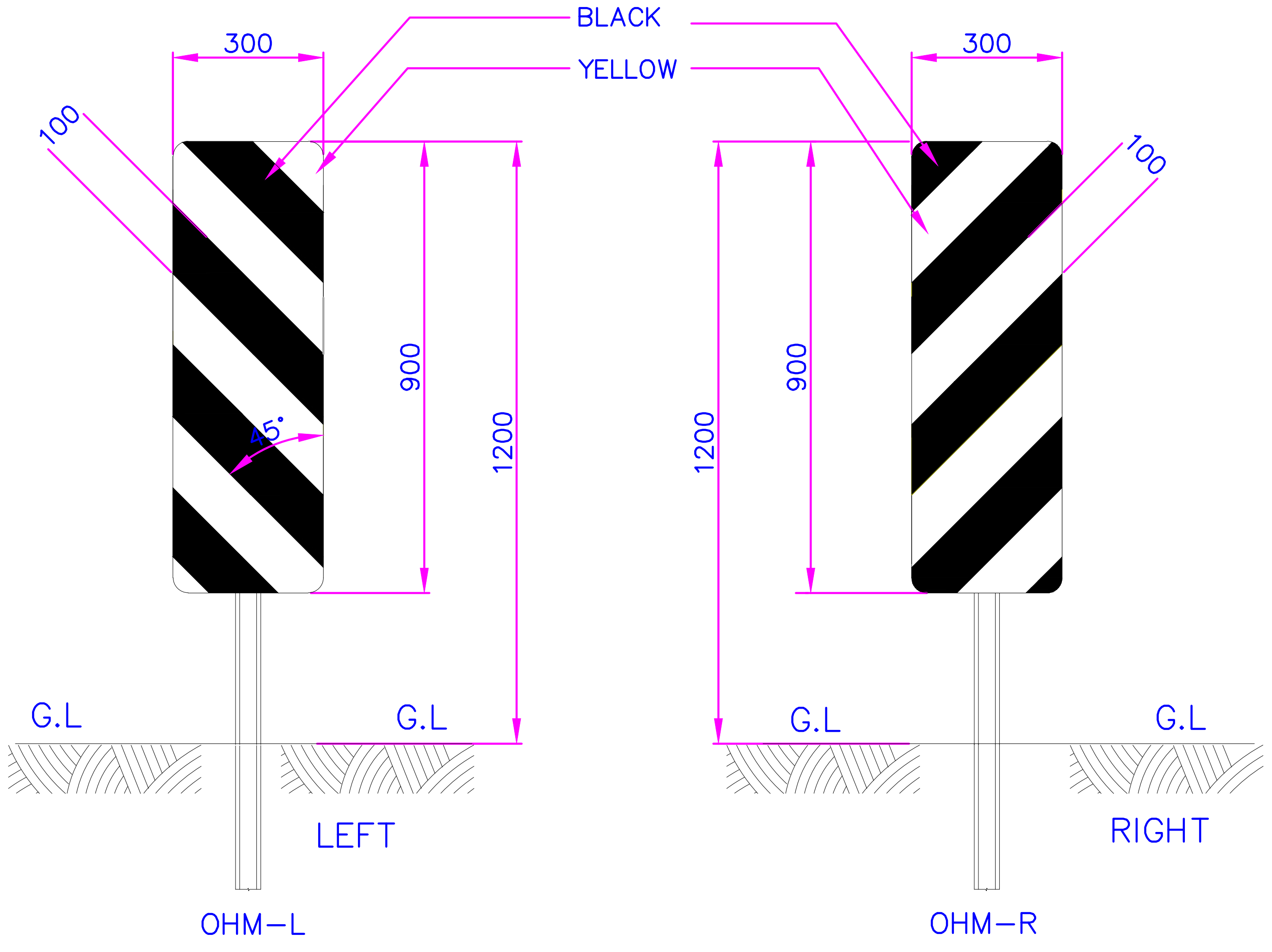
Scale :- As Shown

Sheet size: A2

Project: Consultancy Service for Preparation for DPR for short length transitory 3 lane bi-directional vehicular underpass connecting Hebbal flyover junction to Veterinary college via GKVK premises.

Drawing Title: STANDARD DRAWING
TYPICAL DETAILS FOR PAVEMENT MARKINGS

Drawing No. RC/1640/HO/HBT/TU/DWG/03/R0


300
100
BLACK
YELLOW
300
100
45°
900
1200
1200
900
G.L
G.L
G.L
G.L
LEFT
RIGHT
OHM–L
OHM–R

OBJECT HAZARD MARKERS

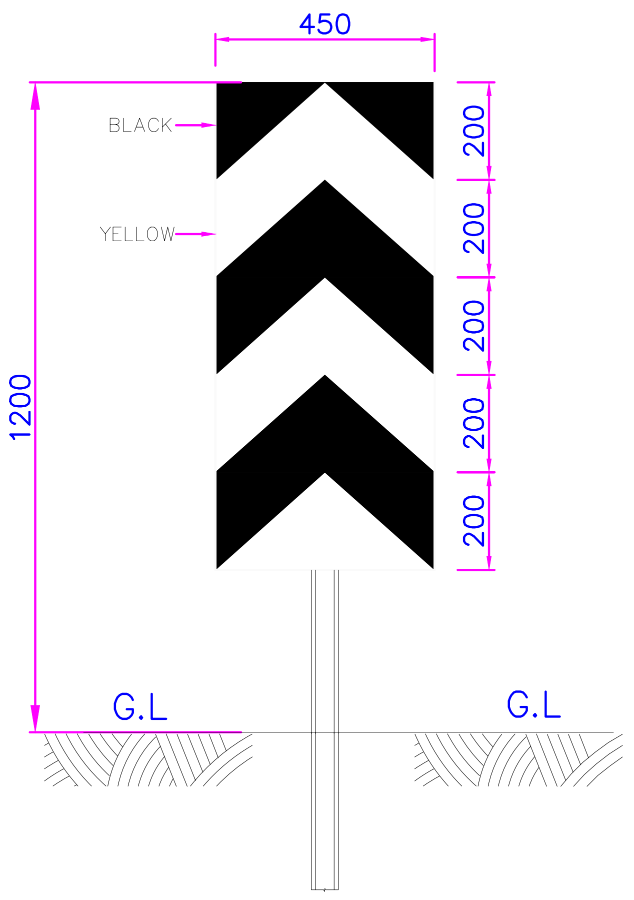
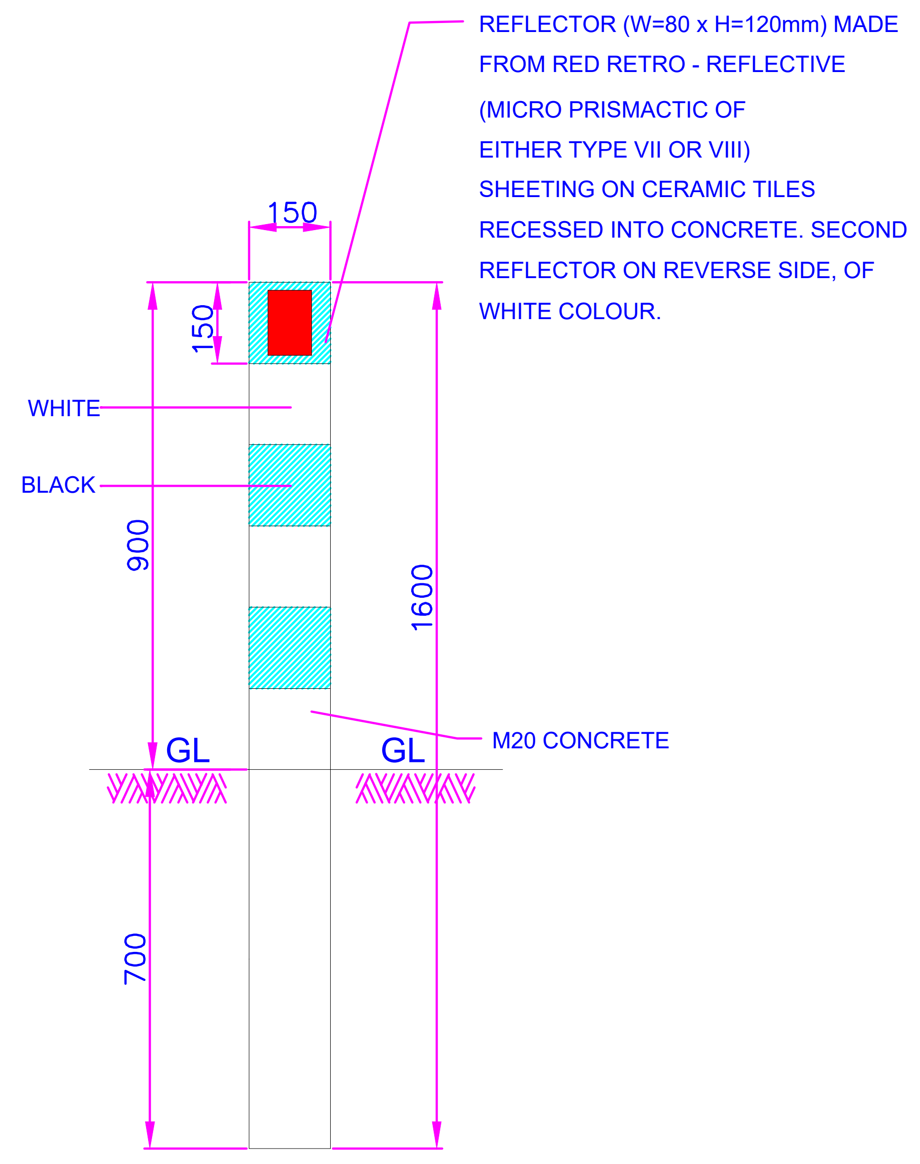
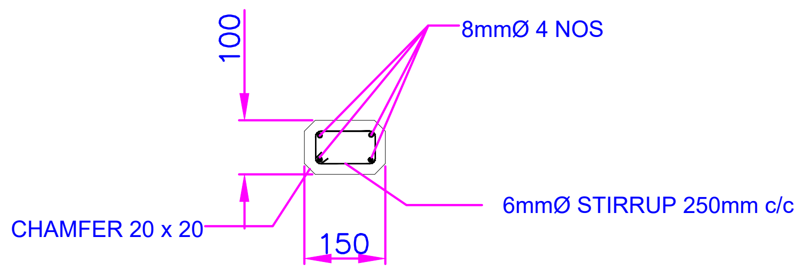

450
BLACK
YELLOW
1200
200
200
200
200
200
G.L
G.L

Fig HP.02
(TWO WAY HAZARD MARKER)

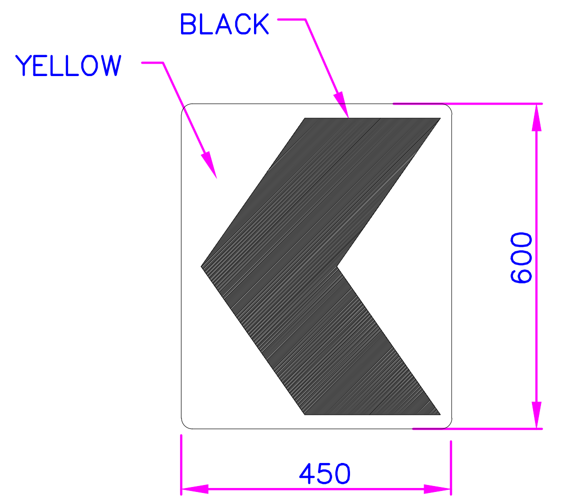

150
150
WHITE
BLACK
900
1600
700
GL
GL
M20 CONCRETE

REFLECTOR (W=80 x H=120mm) MADE
FROM RED RETRO - REFLECTIVE
(MICRO PRISMACTIC OF
EITHER TYPE VII OR VIII)
SHEETING ON CERAMIC TILES
RECESSED INTO CONCRETE. SECOND
REFLECTOR ON REVERSE SIDE, OF
WHITE COLOUR.

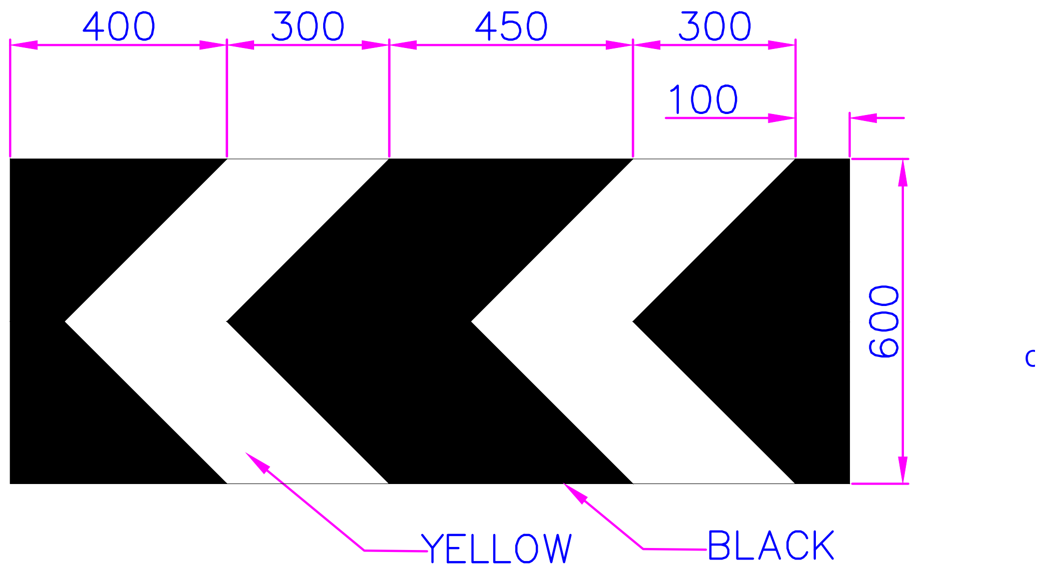
DELINEATOR POSTS


100
8mmØ 4 NOS
6mmØ STIRRUP 250mm c/c
CHAMFER 20 x 20
150

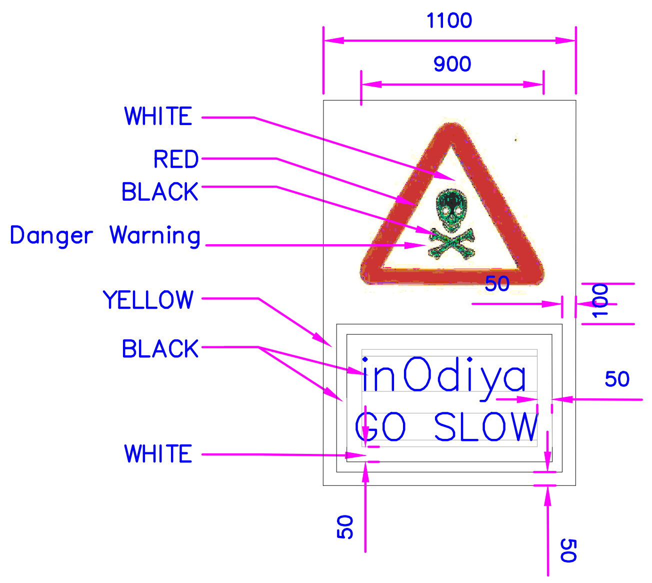
SECTION


BLACK
YELLOW
600
450

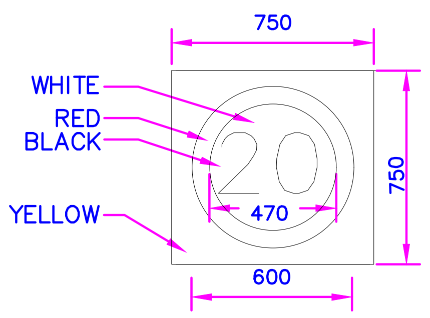
SINGLE CHEVRON(SC)


400
300
450
300
100
600
YELLOW
BLACK

SHARP CURVE TO RIGHT OR LEFT
DOUBLE CHEVRON (DC)


1100
900
WHITE
RED
BLACK
Danger Warning
YELLOW
BLACK
WHITE
50
100
50
inOdiya
GO SLOW
50
50

GATEWAY SIGN GW–01


750
WHITE
RED
BLACK
YELLOW
20
470
750
600

SPEED LIMIT SIGN SS–C

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Drawing No.: RC/1640/HO/HBT/TU/DWG/RM/01/R0

TUNNEL LINE DIAGRAM

(JET FAN)
AIR MONITERING SYSTEM

NOTE: ALL THE DIMENSTIONS ARE IN MM

DENOTION SYMBOLS WITH COLOUR CODES & DIMENSTIONS

S. NO.	SYMBOLS	NAMES	DIMENSTIONS(in mm)	POSITION
1.	▭▫▭	JET-FAN	Ø1000, LENGTH=5000	AT EVERY 120000mm
2.	▭	WATER TANK	5000X5000X2400	ELEVATION 35-40 m (INDICATIVE)
3.	□	PUMP STATION	4000X4000X4000	REFERENCE IN DRAWING
4.	▫	AIR QUALITY SENSOR	93X90	AT EVERY 500000 mm

TUNNEL LINE DIAGRAM PIPE

FIRE EXTINGISHER AT EVERY 90m
FIRE ALARM SENSOR AT EVERY 20m
FIRE ALARM AT EVERY 20m
CABINATE FOR FIRE HYDRENTS

NOTE: ALL THE DIMENSTIONS ARE IN MM

DENOTION SYMBOLS WITH COLOUR CODES & DIMENSTIONS

S. NO.	SYMBOLS	NAMES	DIMENSTIONS(in mm)	POSITIONS
1.	🟡	FIRE ALARM SENSOR		EVERY 20000 mm
2.	◉	FIRE ALARM		EVERY 20000 mm
3.	▭	WATER TANK	5000X5000X2400	REFERENCE IN DRAWING
4.	□	PUMP STATION	4000X4000X4000	REFERENCE IN DRAWING
5.	═	PIPES	Ø100mm(C), Ø200mm(A)	Ø32mm(B) AT EVERY 4000 mm
6.	▭	CABINATE FOR HYDRENTS	1000X1400X400	EVERY 50000mm
7.	○	FIRE EXTINGUISHER	Ø161, H=343	EVERY 90000mm